ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF

THE ILLINOIS STATE MEDICAL SOCIETY

VOL. XXXVII | OAK PARK, ILL., JUNE, 1920 | No. 6

Original Articles

PRESIDENT'S ADDRESS

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OAK PARK, ILL.

During the past twenty-five years the practice of medicine has undergone wonderful progress; concomitant with the changes in scientific medicine there have occurred equally important modifications of the economic conditions affecting the practitioners of medicine.

A generation ago the demands of the state upon the physician were but few. In a general way they were compassed by the occasional death certificate and the reporting of a few contagious diseases.

With the increase in scientific knowledge there developed a large field of preventive medicine to which the medical profession gave active encouragement with the resulting exploitation of the profession which has been persistently progressive.

From the making of a few casual reports the profession has come to be harassed by an enormous number of regulations with special licenses, special entries in several books of record, and voluminous reports of prescriptions with special prescription blanks.

It would appear to the observer conversant with the facts that there is a trend of events that cannot be gainsaid; that the logical interpretation of past occurrences is that the medical profession stands today upon the threshold of state medicine unless the organized profession with united, persistent, aggressive measures combats the various agencies which are so surely bringing about a socialization of the profession.

This exploitation of the profession has not been confined to the legislative bodies but in no small measure it has been evolved by members and organizations of the medical profession itself.

A few years ago there was introduced into our state legislature a bill which prohibited the qualified licensed medical man from doing any surgery until he had been in practice nine years. A few years later a bill which made it mandatory for all diseases of the jaw to be referred to the dentist. At the last session we saw introduced the so-called nurse's bill which made it a felony for a daughter to nurse her mother unless she had first received the degree R. N.

These bills all originated within the profession and received more or less support from part of the profession.

The legislators, not to be outdone, have with each recurring session of the legislature introduced bills without number which were vicious both to the profession and the public.

The initial step in the socialization of the profession was in the passage of the compensation act. This act, with which you are all too familiar, puts the burden upon the physician rather than on the parties most directly interested.

In the state of New York they are today passing through the severest conflict that the profession of this country has engaged in, over the passage of a compulsory health insurance measure. If the promoters of this act are successful in one state it will mean that one state after another will be attacked until all the states have enacted such laws.

The story of compulsory health insurance is extremely illuminating and offers food for much thought on the part of the medical profession.

Compulsory health insurance was introduced into Germany as one of the Bismarck measures; some ten years past it was introduced into England.

In England it was introduced and passed before the medical profession was aware of such intention. This found the English medical world entirely unprepared for such a contin-

*Read at the 70th Annual Meeting of the Illinois State Medical Society at Rockford, May 19, 1920.

gency. In England, as in this country, there were men of prominence who endorsed the measure and it was largely because some of the officers of the British Medical Association were in sympathy with the law that the British profession were lulled into non-resistance until too late. However, there soon arose an uproar, with a hurried meeting of the association and the organization of a defense committee. In many communities the profession at first refused to go on the panel, but these protestants were told that unless the physicians of the community would undertake the work that the government would put in whole-time men. There, as here, the organization of the profession was in such a state that it was conceded that it would be easily possible for the government to secure a sufficient number of whole-time qualified medical men at a remuneration less than would be paid to ordinary skilled labor.

If in England some of the leading scientific medical men were in favor of the bill and if in this country we find the president of the American Medical Association speaking in favor of the measure, are there then two sides to the question? Is it perhaps true that the medical profession does not know what is good for it? Without any prolonged discussion of the subject it may be stated that compulsory health insurance means the socialization of the profession. Will this removal of all competition tend toward a higher level of scientific attainment? Has the experience in the countries in which it has been tried proven that efficiency has been improved? During the past war was it demonstrated beyond all doubt that the regular army medical men were superior to those mobilized for the emergency? Has the public health service of this country developed such high standing in its attainments that we are ready to trust all to such an organization?

Many of our most scientific medical men date the beginning of the decadence of German medicine as coincident with the installation of compulsory health insurance in that country. It is too early to draw any definite conclusions from England, as the advent of the war may have modified the results as they now appear.

However, there is much to learn from the experience in England. For example, it is shown that a majority of disorders are recovered from on Monday; that there are practically no recoveries on Saturday and but very few on Friday; that practically all illnesses range from eight to eleven days' duration.

A movement which is now under way in England is exceedingly instructive as to the next step in the socialization of the medical profession of Great Britain.

In the city of Glasgow there is being worked out a scheme for a public medical service as a substitute for the compulsory health insurance provisions now in operation, which, it is said, provides medical service for only one-third the population; it is proposed to build up a complete medical service, furnishing unrestricted treatment to every citizen needing it, thus involving the enrollment of the medical profession and the public control of all general hospitals and infirmaries.

The Bridgetown district, which has approximately 100,000 inhabitants, is taken as an example. It is found that the volume of business represents 3.11 dispensary visits per person per annum, house visits are one-fourth the dispensary visits. There it is estimated that this mass of medical work can be done by twenty-seven physicians working thirty-three hours per week. A twenty-five per cent. increase is allowed for seasonal variations, also obstetricians, specialists, etc., making a total of forty-three physicians. These physicians are graded in three classes with salaries ranging from fifteen hundred to forty-five hundred dollars per year. This amount of work when figured out is two hundred and eighty-five patients per week or about nine per working hour per physician. The character of the work performed under such circumstances may be easily imagined.

But there is no need of going to foreign countries for reasons for fearing state medicine. Read the comprehensive programs of the American Red Cross and of the United States Public Health Service. Note the free treatment of all venereal cases and of the tuberculous by the state; the growing demand of municipal health officers for the hospitalization of all contagious cases.

At the meeting of the A. M. A. held but recently at New Orleans there were many paternal and socialization schemes introduced. As an example, one of the past presidents of the

association introduced a measure advocating that all hospitals be turned over to a lay organization for standardization and control.

Undoubtedly the greatest menace which now confronts the American medical profession is from within its own ranks.

During the past year there has developed a working agreement between the American College of Surgeons and the greatest and most influential hospital association in this country. With these two powerful organizations working in unison the individual physician is at a very distinct disadvantage and so long as the individual must work as such the program as laid down by this alliance gives promise of achievement.

Doctor, what effect will it have upon you financially and professionally if you cannot take a patient into a hospital as your patient? How will it seem to have it necessary for your patient to be registered as the patient of one of the attending men at a hospital? Perhaps you will welcome the new idea of a hospital making a so-called composition fee which embraces not only the hospital service but includes all medical, surgical and laboratory fees. Will it not stimulate your thirst for knowledge when you awake to the fact that the little hospital in your community is now to have a whole-time surgeon to do all the surgery performed in that institution? Will it be pleasant for you to learn that your patient sent into a hospital, after the discharge from that hospital, is being tenderly cared for by a well-organized follow-up system; a system that has for its foundation a theory that the welfare of the patient is best cared for by the institution rather than the personal physician; a scheme that minimizes the efforts of the family doctor in order to magnify the influence of the institution.

Each year at the annual meeting of this society there is reiterated the need of closer organization. Academically each one recognizes the desirability, but nothing is done. How long is our profession to remain in this lethargy with the shadow of portentious events upon us. Shall we, as the English profession, awake when the shackles are upon us? The Lloyd George bill, as the health insurance measure of England was known, did not grow out of a demand, more or less general, in England for health insurance, but rather it was a political measure to save a losing ministry.

What does medical organization mean? What should we expect and rightfully demand of those put into position of authority in medical organizations? Ought it to be possible for the president of the national organization to favor publicly any measure which the profession has opposed in no uncertain voice, as it has any and all compulsory health insurance schemes, and against which the profession of a state is as bitterly fighting as was the New York medical profession during the past winter? Their testimony is, that the greatest obstacle they had to overcome was that of President Lambert's approval of the measure. Is it not singular that a man whom the profession has so signally honored is willing to take the position that the profession does not know what is good for it?

The American Medical Association is the great democratic organization that should have for its especial object the welfare of the rank and file of the profession. The Illinois State Medical Society as a component state society should also have this as its watchword. There has been much left undone by the organization. The unjust, unparalleled tax of $450,000 per annum from the profession under the Harrison anti-narcotic law was allowed to pass the houses of Congress without the slightest protest of organized medicine. So, with the regulations of the Volstead act, the organization without protests has allowed much of the burden to be placed upon the profession.

There are more or less constantly emanating from within the profession suggestions that the profession organize into labor unions and become affiliated with the American Federation of Labor. In so doing many of us can see but slight advantage, with tremendous disadvantages. However, it is obvious that this call for unionizing the profession is but the expression of disappointment at the inefficiency of our now lax organization.

The need of the hour is for a more militant organization. The profession must speak and speak with one voice. The individual must forsake his personal views for those of the majority.

There is now sitting in Springfield the constitutional convention. Early in its session there were received in Chicago telegrams, long dis-

tance telephone calls and special delivery letters, the burden of which was, like the cry of the man from Macedonia, "Come and help us." The league of medical freedom had introduced a proposal which, if enacted, would allow any and all to practice the healing art.

These eleventh hour calls to combat vicious legislation are of such frequent occurrence that after deliberate consideration on the part of the council of the Chicago Medical Society it was decided that the continuance of organized medicine merely upon the defensive toward vicious legislation introduced by the various cults and pathies was an error and that a definite offensive policy should be undertaken. In compliance with this new attitude there was introduced a proposal which was afterward known as proposal No. 300. This proposal had the unanimous support of the council of the state society and the Chicago Medical Society. It met with the almost unanimous support of the county societies throughout the state. The committee of the constitutional convention to which it was assigned was friendly. You may imagine the chagrin of the representatives of the organized profession when informed that the chairman of the committee in the "con con" had been requested by the Christian Scientists to submit the proposal to seven named physicians before he gave it his support and these seven names included the names of the doctors that are members of the "con con."

The politician now laughs to scorn the medical profession with its hundreds of thousands of members and stands in awe of an organization of a few thousand.

Each year at Springfield we are told over and over again that the profession will not stand together. Nevertheless your society has initiated an attitude of offense rather than defense. It may be said that the profession of this state stands ready to go forward as never before. This attitude must be strengthened. What an organization, functioning as it should, can do, is exemplified by the outcome of the society's activities opposing the annual registration of the physicians of this state.

It would appear that the various legislatures were vieing to make it as easy as possible for the cults and pathies to practice medicine and penalizing the medical profession.

In the existing statutes there are many inequalities; these should be removed as soon as possible by an energetic offensive to secure from the legislature such legislation as shall make but one door for all who practice the healing art.

Any and all modes of paternalism and socialization should be energetically opposed. Upon what stuff do these paternalistic designs feed? That the requirements for entrance into the medical schools as well as those for license to practice have gradually increased under state control has been attributed to the inefficiency of individual in contrast to group methods. But is it not rather because of the changing from a rural to an urban community; the development of the science rather than the art of medicine; the methods of instruction; the passing of the preceptor? Have not all these increased the demand for a more thorough training before entering the practice of medicine?

As further evidence of inadequacy they point to the many health measures enacted by various legislative bodies; to the various cults and pathies that exist from time to time, as well as to the large group found incapable of military service by the draft boards. In reply to the first it may be stated that the politician elected to office desires to build for himself a monument with a law that costs the state nothing and assumedly is beneficial to the people; to the second, that medicine has competition is the sincerest of flattery; these pathists are ambitious to belong to an honored profession but are not willing to undergo the strenuous training requisite to make a physician and so devise a short-cut to their aspiration. Much is made of the point of the great industrial corporations with their sickness and old age benefits and their recurrent examinations of employees as a manifestation of philanthropy toward the employee. Do they not know that these large institutions are but taking a page from Bismarck, whose entire idea of state health insurance and old age benefits was that these people could never demand freedom from the state, as their capital was invested in the state? Does any one question that the large industries are using these same methods to prevent strikes and walkouts? Has not the principal factor in keeping the railroads going been the fear of loss of priority?

The defeat of the compulsory health insur-

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ance measure in New York should not soothe anyone into a feeling of security, as there they are already at work with new propaganda to secure the same end.

The medical profession of this country has given organized and individual effort toward the creation of a United States Department of Health. To this idea all have subscribed; this largely, first, because it appealed to our vanity; second, because many prominent members of the profession approved it. Nevertheless, the safety to the profession depends wholly upon the attitude of the recipient of the office.

For example, the aim of some of the advocates of this venture is that the department regulate the practice of medicine and allied professions; supervise all state departments of health; all state institutions, hospitals and dispensaries; that all candidates to enter the study of medicine expecting to receive state appointment shall first secure a certification of fitness from said department and only to enlist such number as the service shall annually require; in other words build up the same political institution as West Point; to fix a health standard above the minimum of which individuals are to be considered well; to have periodic physical examinations of every individual in the state; the establishment of compulsory treatment, without limitation, other than recovery or death, of those compulsorily examined and found to be below the minimum standard of health and of those taken sick; a compulsory sickness insurance system to provide funds; the insurance premiums and payments to be determined along actuarial lines. Here is the embodiment of the defeated New York measure dressed out in new attire to be foisted upon an unsuspecting profession by the establishment of a national department of health.

Politicians look with much favor upon any new scheme which increases the patronage they may be able to dispense in the form of salaried positions, as these assure at least that many workers at the polls.

That the above picture is not greatly overdrawn as to the activities desired by those now in authority in the government public health service is evidenced by the many bills that have been introduced in Congress in which the various states were to receive government subsidies when these states agreed to act conjointly with the Public Health Service.

There is to be a very definite attempt to secure a national department of health in the near future. Before giving the endorsement of the organization to this venture a little caution should be exercised to see what safegulards there are to be against state medicine.

With the present status of society almost daily there is some new fad being exploited in which the medical profession is expected to donate much of the service while all other arms of the venture receive adequate recompense. These should certainly receive no encouragement, though it may not always be politic openly to oppose.

It would seem advisable that there be a sort of clearing house through which the secretaries of the county societies should receive information upon all topics touching the economic condition of the profession. While much of this is constantly put before the members in the JOURNAL, open discussions of many of these subjects would add much to society meetings and stimulate interest and activity in no small degree.

The profession as a whole should be educated along the political lines affecting the profession. They may safely be taken into the confidence of the leaders of the profession; all is to be gained and nothing lost by such a policy.

There is an unrest among the profession as in other walks of life. However, no one need fear but that the intellectual aristocracy of the commonwealth will do itself justice in this crisis of reconstruction as it did in the period of hostilities. There may be still among the profession those who deprecate as money grabbing any development that places the profession upon a sounder business policy. Be that as it may, today we are confronted not only by a threatened socialization of the medical profession but by a tendency to paternalism which is detrimental to the independence of thought and action of the free born American citizen.

In closing I desire to express my gratefulness to each of the officers of this society for the energetic, wholehearted support which has been accorded me.

I offer to the society my heartiest congratulations on the JOURNAL as now edited by Dr. Chas. J. Whalen. The State Journal has in the

brief ten months of his management taken a definite place in medical journalism of this country. Unless the journal of the national organization becomes more active upon the behalf of the economic rights of the members of the profession I bespeak for your JOURNAL the foremost place among medical periodicals in the United States.

MENTAL SANITATION*

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Exterior environment and internal equipment are so related in cause and reaction that no consideration of one without the other is finally valid to any understanding of wellbeing in either. This has especial meaning with reference to the actions and reactions of man's physical and mental sides.

The body is a mechanism, comparatively gross. Being gross, it is amenable to finer and powerful influences originating in or coming through the action of its internal equipment, the mental part.

The broadest, most inclusive view is briefly summed in the dictum of Hamlet. "There's nothing either good or bad but thinking makes it so."

A man lives in a world of thoughts so much as in a world of things. What he thinks affects his wellbeing quite as much as what he eats and drinks. Mental sanitation is therefore coequal in importance with physical sanitation—a coordinate arm of sanitary science. This was known to Moses of old, who was the first great sanitarian. Without the principles laid down by him, we would have no sanitation; but in addition to these, Moses piled upon succeeding generations those basic laws of morals, of thinking, that to this day govern all civilized peoples in the conduct of their lives; not only as individuals, but as races and nations.

The visible, the ponderable and the material world, is the product and outcome of the invisible, the imponderable and the immaterial. All those things which occupy space and which have the characteristic accidents of matter are but the expression and manifestation of that all prevalent form of energy termed force. Science accepts the truth that "those things which are seen were not made of those things which do appear." The visible is the product of the invisible, the phenomenon of the noumenon.

In an average human body weighing 140 pounds, nearly 104 pounds is water. Water is a combination of two gases, oxygen and hydrogen. The rest of the body is composed of albumen, fibrin, casein and gelatine, organic substances which themselves are resolvable into the four essential gases, oxygen, hydrogen, nitrogen and carbonic acid. "Thus our body is composed only of transformed gases." The vegetables we eat are almost entirely drawn from the air—all vegetables may be resolvable into air, water, or those gases which we have already found in the body. A meat diet is simply a diet of transformed vegetable matter.

Materially considered, therefore, man is merely a stream of sensations, an ever changing ebb and flow of particles. The only constant quantity within him is that invisible, unchanging ego, which no one ever has seen, yet which remains the same through infancy, childhood, manhood and age, which organizes and coordinates particles and sensations, and to which we give the name of soul.

Thus "we find as the support of the universe and the origin of all form, force—the dynamic element."

Such a consideration as this positively changes our old way of looking at things. The world of the seen becomes the world of the unstable, the unreal, of appearance, phenomena. The unseen world becomes the world of reality, of substance, of that which is abiding and causative.

Turning from the macrocosm to the microcosm, we find a similar state of affairs. In men we discover that it is the invisible and immaterial which in large measure determines the visible and material. The utterance of the sage concerning man, "for as he thinketh in his heart so is he," is finding proof and increasing evidence in the science of this present day.

This understanding we reach along the road of science—not of philosophy—in these days. It is by no means profitless to turn our attention now and again in that direction, since it gives balance, counsel and proportion to all right thinking and living.

*Read before the Chicago Medical Society, Oct. 15, 1919.

It is possible for the physiologist to trace the vibrations produced by light or heat from that end-organ in the body which receives them, up the nerve, to the ganglion in which that nerve terminates, even from ganglion to the brain; and then the investigator reaches a gulf he cannot cross. He stands on the border of a mystery. How vibration is transformed into sensation; how motion becomes notion, or notion, motion; how volition becomes action; no physiologist has ever been able to say.

But while the process of sensation and of volition is but partially known, and therefore essentially a mystery, yet two facts are provable beyond a doubt. As sensation proves the action of body on mind, so does volition prove the action of mind on body.

That thoughts do actually affect things is evidenced every day of my life. The movement of my hand is the simplest, nearest evidence. I will to move my hand; I move it; my thought has affected that thing called a hand.

Let us look more widely. The clothes we wear, the houses in which we dwell, their furniture, pictures, books, all are evidences of the fact that thought affects things.

What is graphic art but thought applied to the realm of form and color? So is sculpture, and so architecture. What is music but thought applied to the world of sound? A great city with its streets, buildings, institutions, is only group-ideas manifested in material form—an embodiment of the invisible.

What do we mean by state, nation, civilization? Simply the cooperative and interrelated thoughts of many minds applied to and manifested in that great system of men and things called life. It is likewise true that these things once called into being react upon the thinker and his thought—a reflex influence.

Do you ask why the Italians are natural musicians? Because they have been reared in a musical environment, an invisible but irresistible power. Why are the Americans and English liberty-loving? Because as we figuratively yet accurately express it, they have breathed the air of liberty. These and a thousand other like instances illustrate the fact that the mind is colored by what it feeds on.

But observe this: were there not thoughts in things, things could not affect thought. All these varied material things of our artificial environment, which so powerfully affect and influence our thinking, were thoughts before they were things.

In speaking of man's external environment it is well to remember that man lives not only in a natural environment, but in an acquired or artificial environment which Nature's children make for themselves; and the acquired environment influences and affects the wellbeing of man quite as much as does the natural. The natural environment makes us merely animals; the artificial environment makes us men. The acquired environment is altogether and provably the product of mind. Therefore, mental sanitation is a most important factor in material sanitation, and the two must labor hand in hand for the promotion of the highest wellbeing.

Dr. W. Hanna Thomson, in a little book entitled "Brain and Personality," presents purely physiological evidence that the mind makes the brain. The old view, introduced by Hippocrates and continued down to Karl Vogt, Cabanis and other writers in the earlier years of the nineteenth century, that the brain is a gland and secretes thought just as the liver secretes bile, has gone, never to be revived.

Dr. Thomson from a study of the relation of speech to the brain, and of growth, development, effection and destruction of speech centers in the brain, has given good evidence that the brain is not to be likened to an Aeolian harp played upon by wandering winds, but is rather to the violin, which responds to the touch and interprets the soul of its intelligent master. The brain is an instrument of the mind, which instrument the mind not only uses, but makes to use and makes through use. Thomson expresses it well when he says, "As none of these wonderful mental faculties, including that of speech, was connected with brain matter at birth but was created afterward, it follows that they were created by the individual himself anatomically modifying his own brain. That brain-matter itself did not organize these physical areas of mental function, is shown by their entire absence from the convolutions of the wordless hemisphere."

Again he shows that thought efficiency is not proportionate to brain quantity, therefore it is not dependent on the size of the brain. And the brain of the chimpanzee, as far as structure goes,

presents us not only with every lobe but with every convolution of the human brain. If the similarity of brain formation and mechanism be all that is needed, there would be no reason why baboons could not become philosophers or mathematicians. That is, the chimpanzee has as good a violin as Hoffman, but he is not as good a player. Thomson tells farther that we can make our own brains, so far as special mental functions or aptitudes are concerned, if only we have wills strong enough to take the trouble; and finally he says that the facts of brain anatomy and of brain physiology indicate that this organ of the personality is never other than its instrument, while the personality itself is as different and as separate from it as the violinist is separate from and not the product of his violin.

We could not ask for anything clearer than the testimony of Professor James, of Harvard, that "All mental states (no matter what their character as regards utility may be) are followed by bodily activity of some sort—not only particular states of mind such as those called volitions, for example, but states of mind as such, all states of mind, even mere thoughts and feelings, are motor in their consequence."

To this same end has spoken Professor Ladd of Yale; and President Hall of Clark University says still more positively, "there can be no change of thought without a change of muscle." Prof. Elmer Gates, of Washington, deposes to the same effect: "Psycho-physical experiment proves that conscious experiences, such as those of sensations, intellections, emotions, create structural changes and additions in brain cells, which additions remain as the unregistered memories of those experiences." And the important conclusion is that mind activity creates organic structures, and that mind embodies itself in the mechanism of the body.

We conclude from these general principles that the quality or character of thinking affects the quality or character of our brain, brawn, health, conduct, life. That is, the hygiene of the mind is of as great or greater importance than the hygiene of the body—which is another way of stating that a clean mind and a happy disposition are a legitimate branch of sanitation in a broad sense. Let us then affirm that unclean, impure, unwholesome thoughts affect the man's physical system—that aggregation of matter which he inhabits and which we call the body. "As a man thinketh in his heart, so is he," does not mean that a single thought will cure a cancer or even fill an aching tooth. It does not mean that states of mind tend constantly to register themselves in consequent physical condition. Morbid conditions of mind mean, by and by, morbid conditions of body.

Weakness, irresolution, fear, prepare a soil altogether favorable for the seeds of disease. On the other hand, healthy states of mind—minds free from all grudge, bitterness, envy, minds filled with faith and hope and love—make for health, as do sunshine, fresh air, and pure water. As a man thinketh in his heart, steadily and insistently, be it up or down, so he tends to become!

It is a great deal harder to cultivate right thoughts, right desires, right purposes so that they shall always bear rule within, than it is to go and take something out of a bottle—the real heights of human experience are never reached without hard climbing. But the cry "Good health for a dollar a bottle" is rapidly becoming a spent force. The cry of good health at the price of the cultivation and training of all one's powers, physical, mental, spiritual, by bringing them into joyous harmony with the Infinite, is now to the fore.

Thinking manifests itself most readily in the face. Thoughts of grief affect the tear ducts and cause the man to weep; laughing thoughts, acting upon the appropriate muscles of lip, cheek and eye, make the laughing countenance. The mental state of anger will make the heart beat more rapidly, send the blood rushing through the body with increased velocity, and flush or pale the face. Fear will cause perspiration to break out over the body, drive the blood from the face, and cause such muscular tension or paralysis that severe illness follows and sometimes death. Fear is certainly a mental state affecting the physical man. In fact certain mental states affect the respiration, circulation, the nervous system, and the entire physical man, for harm. Nothing is more clear or familiar to my experience as a doctor than that the mental state known as anxiety, worry, doubt, affects the entire physical man adversely.

These are facts of common knowledge. They have been familiar for years. But the great

advance in these days has been in the discovery of the causes of these striking effects. Professor Gates has shown "that the change of mental state changed the chemical character of perspiration. When treated with the same chemical reagent the perspiration of an angry man showed one color, that of a man in grief another, and so on through the long list of emotions, each mental state persistently exhibiting its own peculiar result every time the experiment was repeated," confirming Professor James' statement "that each kind of thinking, by causing changes in glandular or visceral activity, produced different chemical substances which were being thrown out of the system by the perspiration."

"My experiment," says Professor Gates, "shows that irascible, malevolent and depressing emotions generate in the system injurious compounds, some of which are extremely poisonous; also that agreeable, happy emotions generate chemical compounds of nutritious value, which stimulate the cells to manufacture energy."

It is apparent then that when the late lamented Bill Nye spoke of having a "dull maroon" taste in his mouth on the morning after the night before, he voiced the effect of deep remorse in the language of fact rather than of figure.

Whether you are ready or not to accept the results of Professor Gates' experiments is unimportant. It is clear that our attention is very definitely directed to the undeniable fact that an unwholesome mental state causes unhealthful bodily conditions. That many a physician would prescribe more wisely and well for his patient by directing the patient's mind than by dosing his body, I have little doubt.

As it is true that unclean and unhappy thoughts effect the bodily health adversely, so it is likewise true that clean, wholesome and happy thoughts affect the entire man helpfully and healthfully. Dr. Anderson says, "experiments comparing agreeable exercises with those that are not so agreeable showed that movements in which men took pleasure set in motion a richer supply of blood than those which were not to their liking. Pleasurable thoughts send blood to the brain; disagreeable ones drive it away." And President Hall has written, "The hair and beard grow slower, it has been proved by experiment, when a business man has been subjected to several months of anxiety. To be happy is essential. To be alive and well and contented is the end of life, the highest science and the purest religion." I do not believe anyone will be inclined to disagree with the conclusion.

So it is plain that if a man's thoughts are sweet and wholesome, if his disposition is hopeful and happy, it will be better for him bodily, socially, economically and politically; in every way better for himself, and therefore better for his environment, which includes those many other persons with whom he comes into contact and relation for help or for harm. Indeed, one of the best services man can render to his fellow man is to have a calm mind and a sunny disposition, and so radiate light wherever he goes.

That a clean mind and a happy disposition are practical possibilities is capable of substantiation. The mind has power to determine itself.

This is indeed the essential characteristic of mind. I am not going along the path of the afferent and the efferent nerve to the various ganglia in the spine; I am not going to dwell upon the function of reflex action, sometimes thought of as unconscious action, which it never is, nor am I going to call attention to the limitation of reflex action in the well-recognized law of inhibition; I am not even going to sing the familiar song of Habit, its uses and abuses, though that song will never grow old nor cease to make its music or its misery in life so long as nerve stuff is capable of education through stimulation; I shall avoid all these fascinating by-paths, and simply affirm the fact that the mind has the power of self determination in its own mental states. This is the divinity within a man; this constitutes personality. Gain the ear of the will first, and everything follows naturally, because physiologically. Therein is the analogy here between outer and inner, general and individual sanitation.

When the legislature, local or general, enacts laws regarding clean backyards, pure drugs, pure food, the end of all sanitary work is in a measure accomplished; but after the enactment must come application and untiring enforcement of the law. As the campaign previous to the passing of the law must in large measure be a campaign of theoretical education, so after the law is on the statute books there must be a combined effort for practical education, until the people at large get the sanitary habit.

Likewise when those of the inner branch of sanitary science can bring it to pass that the legislature resident in every man shall enact laws regarding clean thoughts, happy disposition, the value of mental pure air and of thought sunshine, much will have been done in the direction of better living.

There is another side to the affirmation that the mind has the power of determiing itself. It is the peril which always accompanies the possession of power. It is possible for the mind to prove traitor to itself, to sell its birthright, and as Shakespeare says, "make the worse appear the better reason." Prove false to the light you have, and your light becomes darkness. An evil will can compel the mind to give good reasons for a bad cause.

A prominent body of professional men among us live by letting out the entire equipment of their mental faculties for hire. After a lawyer has accepted a retainer he commands his mind forthwith to busy itself with all its resources of reasoning and of persuasion for the party who pays him. Even his emotions, from the extremes of pathos to those of indignation, may be pressed into the service as well. But no man can let out his will for hire, and he lies when he pretends to.

Therefore, an eye open to the light and a will responsive to the self-evident truth is the only simple, safe prescription for making a brain that will deal with you honestly. "To thine own self be true, and it must follow, as the night the day, thou canst not then be false to any man."

For the man with the unhappy and disagreeable disposition to say, "I was born as I am, and I am not responsible," is to surrender the goodly country without a blow; is to play traitor and throw open the gates of the mind to the entrance of every hostile influence. It is to yield the case before it has been begun. To seek to shift the responsibility and to lay the blame on other than self, to say, "Don't blame me, blame grandfather or Oliver Cromwell or anybody else for my disagreeable disposition," is to follow a common, natural, and fatal tendency. You may remember than Adam blamed Eve for the trouble, and Eve blamed the old serpent, and I have little doubt the old serpent did not allow the blame to remain on his head; and so it has gone, from that day to this.

If wo do not blame our ancestors for what we are, we blame our contemporaries, or our environment or anything other than self. The absurdity of this is plain for the reason that the environment will never make the man; it only helps the man to make himself. In saying this we do not minimize the importance of the environment, but we do magnify the importance of the mind, and the mind in its largest sense, is the man. It is the man who makes the environment. There are many people who are falsely prolific in excuses. For every failure they bring forth a perfectly adequate and plausable explanation. They always keep a scapegoat tethered in their neighborhood. There never was a criminal who could not to himself make out a good case for himself.

The utter fallacy of all self-excuse is further plain from a consideration of the kingly power of the human will. No one and no thing can compel my will, but myself. This power I can exercise, though I can not explain the process by which I do it. I only know I can.

"This freedom of the self from determination by the world of objects," says Clark Murray, "is the fact which alone explains, without explaining away, the knowledge that there is within us a center of conscious activity which is, in the last resort, impregnable to any assaults of mere force. You may apply to any organism superior forces of organic bodies, and compel it to act as you wish. You may employ all the sensible inducements at your disposal in order to bend me to your purpose; you may tempt me with the most bewitching sights of sense, or scare me with its most frightful agonies. You may even, by ingenuity of torture, so shatter my nervous system as to prevent me from carrying out into the world of sense the deliberate resolutions of myself. But there is one thing which mere force—force separated from reason—cannot do: it cannot compel me."

Nay, I say it reverently, even God refuses to compel man's will, and his power over us is limited by that amount of will-power which He has delegated to us. This power of will within us is our resident Divinity, and we are like Him in that we are free agents.

If one should ask how our unhappy and unwholesome dispositions have grown to be what they are, the process can be stated in almost syllogistic form.

We have begun with the false major premise, "I am not to blame for my disposition." We have continued with the false minor practice of

crabbed, critical, unsympathetic, unhappy thoughts and acts with respect to this and that person, this and that situation, until we have reached the miserable conclusion, and like Sinbad the sailor, continue our burdensome, baneful way through life with that old man of the sea, an unhappy disposition, clinging to our backs.

Some one will ask, how is this unhappy disposition to be changed? I answer in like manner: as it was created; by degrees, by persistence, by patiently unraveling the mental tangle, by gradually displacing the sad and anemic cells of the brain with healthier, wholesome substitutes; by recognizing the power of happy thinking; by exercising that eternal vigilance which is the price of personal as well as of political liberty.

The very fashion of our features and the attitude of our bodies can help us in this worthy work. It is possible to get out of bed in the morning wtih a pleasant expression on the face, and to sing while dressing, if you only will do it. Force a smiling face and the smile will come spontaneously after a while. The Japanese have consciously trained themselves in the art of smiling. "Cultivated from childhood as a duty, the smile soon becomes instinctive."

Suppose each morning when you awake to a hard day, you utilize the well-known principle of mental suggestion by deliberately storing the mind with right thoughts. Begin your day with the repetition of certain assurances, uttering them over and over with your lips, and your mind, and your soul, until the full strength of them is felt in every cell of your being. "I will fear no evil." "In quietness and in confidence shall be my strength." Begin the day with these and other promises like them ringing in your ears, singing through the secret chambers of your mind, throbbing with added strength in the pulsations of your heart. When you relax the tired muscles and the weary brain at night as you sink to sleep, do it with the same confident assurances furnishing your final mood, and yielding their wholesome, restful influence through all the hours of sleep.

I know a woman who has cured herself of a tendency to melancholia by going into a room by herself and exercising her risibilities until the outward action produced the inward state. A smiling face may induce a smiling mind. To this effect has William James written in his talks to teachers: "Thus the sovereign voluntary path of cheerfulness, if our spontaneous cheerfulness be lost, is to sit up cheerfully, to look around cheerfully and to act and speak as if cheerfulness were already there." In short, if you haven't a happy disposition get busy and make one.

What is the final cause or trend and promise of all this sanitation, mental and material?

I believe it to be obvious that a perfect environment is futile for an imperfect man. If the man will not correspond with the environment, the environment will not make him. It is possible to be the son of a professor, in a college town, and grow up an ignoramus, or to live in the sunshine of Southern California, and dwell in a cave.

Jacob Riis has shown us that sanitary tenement houses may be used in a most insanitary way by people who are not willing to live up to the improvement. Moreover, a perfect man is helpless in an imperfect environment; the environment will kill him, as corrupt Judaism killed the Christ, or as fever-laden air will kill the strongest man. But when we have reached the point where we have a perfect man in a perfect environment; a clean and happy mind in a clean and wholesome world, then the old ideal of the Roman philosopher is attained—"mens sana in corpore sano." Then the terms of the definition of life of the modern scientist are satisfied; and we have the conditions of life eternal.

The testimony of science is to the effect that the environment is improving year by year, age by age; this is the promising principle of material evolution.

The testimony of the psychologist is to the effect that the mind is advancing and improving year by year and age by age. This is the promising principle of spiritual evolution.

X-RAY TREATMENT OF EXOPHTHALMIC GOITER*

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The treatment of exophthalmic goiter and other forms of thyrotoxicosis by the roentgen ray

*Read before the Chicago Medical Society, February 15, 1920.

is of definite value when its selection is properly made and its application properly performed.

Its use dates as far back as 1905; since that time it has been used by some of the prominent Roentgenologists and a few clinics; however, no general attention has been given to this subject, although much literature has accumulated since then. The work of Stoney, Lange, Pfahler, Holmes, Boggs, Grier and other American contemporaries has been gifted with the gratifying results of amelioration and cure, the percentages of cure being so satisfactory as to invite a more universal application of a method that is associated with such a relatively small margin of danger.

Roentgenotherapy is not to supersede surgical interference, rather is to be preferred in many cases because the percentage of cure is as great as that following surgical intervention. No doubt great judgment in the selection of cases for surgical work is necessary, also great skill in surgery and anesthesia is required. The death rate in surgery runs about 6 per cent while recent developments by Crile have reduced the rate of mortality to 1.1 per cent in 388 consecutive thyroidectomies. It must be conceded however, that it is highly probable that some of the deaths were unavoidable and might have terminated in death as a natural sequence, so that statistics do not do justice to surgical practice. Granting this to be true, there is still a balance in favor of roentgenotherapy for no deaths follow its use.

To determine the value of any form of treatment it is necessary to know and consider the percentage of patients suffering from the disease who recover without any treatment. Stanton believes that exophthalmic goiter is a self limiting disease and that in from 60 to 70 per cent of the cases, spontaneous cures occur at the end of five or six years. Hale and Whitney followed eighty-seven cases of exophthalmic goiter treated at Guy's Hospital, London. After a number of years it was found that sixty-one of these patients were cured, twenty-one vastly improved and five remained unimproved.

These reports if accepted, would seem to imply that if any form of treatment is of value, it must give a high percentage of cures or produce prompt relief of many symptoms. In this respect roentgenotherapy is to be the method of choice.

Early operations are better than late ones, this applies with equal force to the early use of x-ray, for it is a rather unfortunate circumstance to advise roentgenotherapy as a last resort.

Experimentally it has been shown possible to destroy the glandular structures by subjecting them sufficiently to the roentgen ray. It is also known that the higher organized type of cell and tissues of the lymphatic system are especially vulnerable to the destructive action of this form of light.

The structure of the thyroid gland is somewhat allied to lymphoid tissue and we often have an associated enlargement of the thymus gland. (Kocher found this to be true in fifty per cent of his operative cases).

If these are the facts and the amount of irradiation sufficient to destroy the gland is not greater than that which will produce an injurious effect on the skin, it should be possible to remove all or part of the gland by roentgenotherapy, and produce results similar to those achieved by surgery without the dangers connected therewith.

Great emphasis must be laid on the importance of careful diagnosis and the selection of patients to be treated. The physicians best able to treat goiter must have developed sufficient judgment to enable him to select the treatment, medical, surgical or roentgenological, best adapted for each individual case. To determine this a careful study of many factors is necessary.

In the past operations have been performed on the wrong class of cases at the wrong time, either too late or at the height of the toxic symptoms. Many cases have been treated too long medically. The same can be said of many roentgenologists; they have treated cystic, calcareous or colloid goiter and expected results. Should the case not be one of thyrotoxicosis, irradiation may produce harm, therefore, these cases should be studied by a competent clinician.

Crotti classifies enlargements of the thyroid gland as benign, or malignant tumors, or inflammatory.

Benign tumors he divides into parenchymatous and colloid. The parenchymatous are subdivided into physiological, non-toxic and thyrotoxic; and the colloid into osseous, calcareous, fibrous and cystic.

Microscopically the parenchymatous form

shows an increase in size and number of the normal glandular element, but they have kept more or less their natural relation to each other. Colloid goiter varies considerably in degree, the main characteristic is an increased amount of colloid material. Colloid degeneration may be localized or affect the entire gland; it may later give rise to a cyst. The cyst may become chronically inflamed, thus forming a fibrous goiter.

Even in diffuse colloid goiter every follicle has not undergone colloid degeneration. There are always a number of normal vesicles between the degenerated follicles which will proliferate and form new alveoli to make up for the lost function of the degenerated follicles. Adenomatous goiter, either of fetal or adult type of parenchyma may be encapsulated or diffuse, and shows a regeneration of a previous atrophic parenchyma.

Goiters have been classified as hyperplastic and non-hyperplastic, at the Mayo clinic. Two thousand nine hundred and seventeen cases were operated on between January 1, 1909 and January 1, 1913. Of these 42.8 per cent were hyperplastic and 57.2 were non-hyperplastic. Of the hyperplastic 92 per cent were toxic and 8 per cent were non-toxic. Of the non-hyperplastic type 23.3 per cent were toxic and 76.7 per cent were non-toxic. According to Wilson the pathology of the thyroid in true exophthalmic goiter is essentially a primary parenchymatous hypertrophy and hyper-plasia, that is, an increased amount of functionating parenchyma associated with an increased absorption. The process is an acute one. The pathology of a toxic simple goiter is marked particularly by atrophied parenchyma, decreased function and decreased absorption and is usually a chronic process. The pathology of toxic non-exophthalmic goiter (that is, those resembling exophthalmic goiter) is one of increased parenchyma through regenerated processes in atrophied parenchyma of the fetal type, with increase in each instance of secretory activity and of absorption. This process is also a chronic one.

The differential diagnosis of many mild atypical or very early cases of thyrotoxicosis by means of the ordinary clinical signs and symptoms can only be made with varying degrees of probability.

The symptoms of hyper-thyroidism vary somewhat in type as well as in intensity and need not necessarily be proportionate to the size of the thyroid gland. There are all grades of hyperthyroidism varying from a typical case, with all the classical symptoms to a case of simple nervousness, characterized by slight muscular tremor, moderate cardiac irritability, little or no exophthalmos, with little or no enlargement of the thyroid.

Laboratory methods such as the determination of basal metabolism and hyperglycemic tests, serve as determinants of exophthalmic goiter, bearing a similar exactness as does the Wassermann test to syphilis. Lastly, but not least, is the application of a therapeutic test, when a remote possibility of exophthalmic goiter is entertained. By this is meant, the application of roentgenotherapy and noting results. The great virtue in doing this is its harmlessness and the occasional surprising curative results.

The transitory symptoms produced by changes in the thyroid may not be due to hyperthyroidism or to hypothyroidism, but rather a dysthyroidism (Janney). This should make it apparent that an excision of part of the thyroid gland or treatment by radiation requiries considerable judgment.

Animal experimentation has shown that there is a super-abundance of the glandular element of the ductless glands, with a wide range of functional activity, often permitting the removal of a large portion of the gland without apparent loss to the system. It has been estimated a child needs at least one-third of the thyroid while the adult may maintain perfect health with one-sixth of the gland.

The adolescent goiter accompanied by toxic symptoms is amenable to roentgenotherapy with no untoward results. Medical and surgical treatment are sometimes considered with reluctance because of the dangerous possibilities and also because they tend to get well spontaneously.

However, it is impossible to prognosticate the ultimate result in after years, for C. H. Mayo has stated, "that such glands are subject to degeneration,—fibrous, cystic or calcareous."

Boggs treated such cases twelve years ago and states that up to the present time none of these have shown evidences of degeneration.

TREATMENT

The writer has practiced two techniques:

Technique 1. Interrupterless machine, broad

focus Coolidge tube. Parallel spark gap 9 inches. The rays filtered through four m. m. of aluminum and 1 m. m. of leather. The skin focus distance was 8 inches. Three areas were treated at each sitting, each area receiving two-thirds of an erythema dose. Areas treated: 1, right half of goiter; 2, left half of goiter, 3, thymic region. This constitutes one treatment. Repeat in three weeks.

Give such treatments then stop for three months; this is considered one series. Then give a second series. If necessary a third series may be given after waiting three months.

Technique 2. Interrupterless machine. Broad focus Coolidge tube; 9 inch parallel spark gap, 4 m. m. of aluminum filtration. 1 m. m. of leather filtration. Skin focus distance 14 inches. Sittings 3 to 6. Six areas, 1, right anterior thyroid; 2, left anterior thyroid; 3, right anterior thymus; 4, left anterior thymus; 5, right pasterior cervical ganglion area; 6, left posterior cervical ganglion area. Dose, one-half erythema over each area. The same frequency of repetition as technique 1 applies. The technique as given in 2 is one of choice when patient is not highly toxic, permitting a gradual recrudescence of symptoms with less tendency towards recurrence. The areas over the cervical ganglia are included, based on the observations of Cannon that stimulation of these centers causes secretory activity in the thyroid, conversely the effect of the x-ray seems to inhibit their action.

Supporting Cannon's claims are the operative results of Schwartz who practised bilateral resection of the sympathetic nerves with some good results.

If for any reason such as cardiac debility or marked thyrotoxicosis immediate results are desired, technique 1 is to be employed.

If operative interference becomes necessary it is desirable to give an intensive course several weeks prior to operation.

Some claims have been made that changes in the capsule interfere with the removal of the gland; this however, has been refuted by the experiences of Ludin, Holmes and others.

The earlier the cases receive treatment the sooner their response to roentgenotherapy.

The favorable signs are the abatement of the nervous symptoms, gain in weight, slowing and stabilizing of the pulse, with a lessening or disappearance of exophthalmos in about 40 per cent of the cases. The goiter may or may not decrease in size.

In ambulatory cases no interference with the daily occupation is necessary; in marked thyrotoxicosis regulation of diet and rest, both physical and mental are essential.

All foci of infection should be removed, especial attention being paid to the teeth.

Some of the undesirable and dangerous possibilities are hypothyroidism, telangiectasis and atrophy of the regions treated. These patients are particularly susceptible towards atrophy and telangiectasis, and as the majority are young women, the resulting disfigurement (when it does occur) is of considerable import. These changes are more liable to occur when unfiltered rays are used or repeated erythema produced.

The first treatment may increase the toxemia to a dangerous degree. To guard against this, start with small doses and precede same with rest in bed. Where surgery has been employed but no complete cure effected, great caution should be used as the danger of hypothyroidism is then greater.

Treatment should not follow operation too soon and should not be prolonged.

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DIABETES MELLITUS*

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Dr. J. B. Dalton in the preface to his work on physiology stated that the recent discovery by Claude Bernard in 1857, of the glycogenic function of the liver promised to reveal the true nature of diabetes.

Since that time many facts relating to the subject have been discovered, but diabetes mellitus remains a mystery. We hear of bread as being the staff of life, but to a diabetic it is a poison. This only illustrates what a calamity it is to suffer from diabetes because true diabetes is considered incurable. This statement becomes natural when we recognize what the real facts about diabetes are. The muscles are the furnaces of the body, supplying it with heat and power. The blood in the veins from the large muscles like the gluteus maximus is much more venous in its character than the blood in the right chamber of the heart. This indicates how much of something has been burned up in the muscle while the blood was coursing through it. That something is the carbohydrate in our food composed of the starches, sugars and fats. It is the combustion of these elements of our food in the muscles that we find the source of heat and of the power which the body requires for its life, but in diabetes the muscular tissues do not sufficiently burn up the carbohydrates. These have been before properly changed into the most easily consumed of carbohydrates, viz, sugar—and as the muscles fail to oxidize it, the sugar accumulates in the blood until it is beyond what the blood can carry, viz—15 per cent. All above this has to be gotten rid of by the kidneys causing glycosuria or sweet tasting urine. Glycosuria is, therefore, the first sign of diabetes, and when it is found no one can be sure whether it will go on to full diabetes or not. Often glycosuria can be made to disappear either by lessening the intake of carbohydrates or by drugs so that some speak lightly of the appearance of sugar in the urine as not itself of much importance. One might as well say that fever is a trivial sign, because it is so often transient and moderate in degree. Glycosuria is always a danger signal. The carbohydrates never make tissue, but on the other hand, they have to go through various processes before they can be burned up. The first is their conversion into glycogen, in which form they are stored up in the liver and also in the muscles. The storage of glycogen in the liver is estimated as one-tenth of its weight. Bernard, on its first discovery by him, correctly said that the final change of glycogen is for fuel in the muscles. The principal preparatory process necessary for the glycogen to be burned up by the muscles is by the action of the internal secretion of the ductless glands, the deficiency of which will suffice to cause the sugars to escape combustion and thus produce glycosuria. The most remarkable illustration of this is furnished by the glands embedded in the pancreas. The glands have nothing to do with the function of the pancreas itself. Their relations instead are with the metabolism of the carbohydrates, and it is not owing to the mere quantity of their secretions that their specific effect is produced, for if only a few of these glands remain when the pancreas has been cut away, those few glands are sufficient to answer all the purposes of preventing glycosuria. This clearly proves that all these glands do is to produce an enzyme, however small the quantity, which will answer all the purposes.

The secretion of other ductless glands can also bear the same relation to the metabolism of the carbohydrates. This is shown in that remarkable organ in the body, the pituitary gland. This small body, which weighs only about five grains, is located in the most inaccessible part of the skull, the sella turcica, and notwithstanding its small size, it bears important relations to the nutrition of the body. Injuries to the base of the skull are often followed by glycosuria, which may also appear when a tumor is growing in the neighborhood of this gland irritating it. Should the tumor however destroy the gland then we find the opposite of glycosuria developing, for the patient can now show great tolerance for sugar and a marked increase of fat in all parts of the body.

Glycosuria or true diabetes may also develop in diseases of that other ductless gland, the thyroid, and then soon proves fatal. The ductless glands are all associated together in their functions so that they are found to be enlarged or diseased in common in the same person. As

*Read before the Clark County Medical Society, Sept. 11, 1919.

to the relation of the ductless glands to the production of diabetes, there is little doubt that their functions though necessary, are simply preparatory to the ultimate use of the carbohydrates by the muscles. The conclusion then is that diabetes is primarily a muscular disease, but how it is so, is as yet unknown.

Diabetes goes by contraries. Ordinarily, youth is the age with the best outlook for the future, but in diabetes, the prognosis is invariably worse the younger the patient, and steadily improves with advancing years. With young children, it is soon fatal in most cases. It is curious that though the liver holds the greatest store of glycogen in the body, diabetes of hepatic origin is unknown. The liver may be damaged by accident or disease with no trace of consequent diabetes. The same is true of the kidneys. Though the kidneys have so much work to do in the polyuria, which carries off the sugar in the blood, yet diabetes is not associated with kidney disease. Men are more frequently affected than women, the ratio being about two to three. It is also a disease of the higher classes.

In severe cases of diabetes, the disease may go on though all carbohydrates have been removed from the diet. The continuance of diabetes in them is, however, due to the destruction of proteins in addition to the carbohydrates of the body itself. And while this is occurring, there is a marked increase in the urea eliminated from the body. It is then a good plan to regard the percentage of urea as a good standard for estimating the gravity of the complaint. The general lowering of the vitality caused by diabetes renders the body very susceptible to various infections, chief among which is the tubercle bacillus, which carries off a large number of diabetics. Thus pneumonias of diabetics are likely to become caseous or terminate in gangrene. Pus organisms are also apt to invade the skin and give rise to boils or large carbuncles. Every case of carbuncle should have the urine examined for the presence of sugar. Symptoms are usually insidious in its onset, the patient first noticing that he is passing more water and more frequently. Along with this is often an abnormal appetite or a sense of hunger; then he notices that he is more easily fatigued than usual. Emaciation usually sets in in a majority of cases soon after polyuria.

All along he is thirsty and when the disease becomes fully established, the thirst becomes exceedingly distressing about two hours after meals. In addition, the patient becomes irritable and nervous or else melancholic. The skin is ordinarily dry and harsh unless the patient is phthisical. One of the most striking symptoms is the appearance of the tongue. It is red all over and has been called the beefy tongue. In advanced cases, the breath has a sweet odor and this symptom is of serious importance. As a rule, the bowels are constipated, and the patients are frequently depressed in spirits. Cramps in the calves of the legs are very common and lumber pains, which may be mistaken for lumbago, the distinction being that the pains are not aggravated by bending the spine, which they always are in lumbago.

The treatment of diabetes is wholly empiric owing to our ignorance of the pathology of the disease. Thus there is no accounting for the fact that the younger the patient the more hopeless the case, while the prospect becomes better and he becomes more amenable to treatment in proportion to his advancing years. Other facts also reported by well qualified observers in the history of this complaint are equally unexplainable. Patients with severe and chronic diabetes until even dangerous acidoses is present, have wholly recovered after surgical operations, such as those about the prostate gland in males and the removal of the uterus in females. Such occurrences are not explainable. One fact is well established and that is that each person has his own ability to use starches in his food. Many persons find that a marked excess in partaking of starchy foods causes glycosuria, but this varies with each individual, for whole races of mankind as the Japanese live upon nothing almost but rice, yet they are no more subject to diabetes than other people. When glycosuria is caused in any person by excess in partaking of starchy foods, it is termed alimentary glycosuria, and is readily cured by diminishing the amount consumed. The clinical rule is, therefore, universally applied, viz, to find out how much any individual may partake of starchy foods without sugar appearing in the urine. In most cases this restriction in itself suffices to cure the complaint. In severe cases, however, as before stated, sugar still appears even though all carbohydrates have been

excluded. The sugar must then be formed from the protein tissues of the body itself. The so-called alimentary glycosuria may happen in persons who are normally fat and if it is not controlled by the withdrawal of carbohydrate food it will soon yield to the administration of five to ten grains of antipyrin with an equal amount of sodium salicylate. The treatment of diabetes by drugs is not satisfactory except in persons after middle life.

For a long time opium and its derivative, codein have been reputed as the most efficacious drugs; it should undoubtedly be used in those otherwise hopeless cases in young persons. Opium may be given in one grain doses four times a day gradually increasing until the patient shows symptoms of opium poisoning by symmetric contraction of the pupils and slow respiration. It is noteworthy that these patients show a great tolerance for opium. Some preference is given to codein because it is less constipating. As with all other drugs in the treatment of diabetes no effect will be produced unless the patient is on a rigid diet. The only reason that opium or any of its derivatives are recommended for this disease is because the percentage of sugar in the urine is temporarily decreased, but a permanent cure of diabetes by this drug has never been reported so that most observers seldom use it because it is only a functional medicine. Cod liver oil has been used by some excellent men with success where it can be taken in large doses without interference with digestion and extended over a long period of time. Iron has also been extensively used. As before stated, diabetes being a muscular disease in large measure, muscular power is in proportion to the intake of oxygen and as iron acts as an oxygen carrier, patients should be given all the iron that they can take, with all the fresh air that they can get.

The next agents to be considered are coal tar derivatives, such as antipyrin and phenacetin, including salicylates and the benzoates; with these agents should also be considered arsenic acid watching the development of arsenical symptoms. If the patient is voiding large amounts of sugar so that speedy reduction is necessary, give fifteen grains of antipyrin with a like amount of sodium benzoate four times a day. If insomnia be present twenty grains of strontium bromide with fifteen grains of antipyrin at bed time will be found useful. By careful observation and skillful management the lives of diabetic can be much prolonged along with the preservation of bodily strength so that in many instances they continue in active business for years.

DIABETES INSIPIDUS

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The disease under consideration is one of considerable rarity, the frequency, according to one author, Futcher, being only .001 per cent., or in other words, seven cases in something over four hundred thousand. There has been some confusion in differentiating this malady from other conditions accompanied by polyuria. Also, as will be mentioned later, in a number of mental conditions polydipsia occurs and this is naturally accompanied by an increased output of urine.

The case about to be reported concerns a male Italian, 27 years of age. Beginning about the first of June, he began to have an intense thirst, accompanied by a marked excretion of urine. There were no other symptoms. In particular we inquired as to the presence of pain, cough, and also in regard to his weight; he denied any loss.

Past History. We were unable to discover anything of importance in his previous illnesses and the same is true of the family history.

The physical examination was entirely negative except that there was, in the left pulmonary apex with the x-ray, evidence of fibrosis, apparently a healed tuberculosis.

During his stay in the hospital his urinary output ranged between 6,000 and 9,000, usually about 7,000. There is nothing in his makeup to make one think of any mental disturbance.

Having in mind the possibility of a lesion of the pituitary gland, the eyes were carefully examined by R. B. Blue, who reported entirely negative findings. Also an excellent x-ray of the head was made by Miss Brindley and the sella turcica appeared to be entirely normal. There was no enlargement and the outlines were all very distinct. The laboratory findings showed a normal or practically normal blood count and a negative Wassermann. The urine showed a gravity ranging between 1005 and 1008,

usually about 1006. At no time was albumin or sugar found and the microscopic examination was always negative. An attempt was made to study the concentrating power of the kidney, and, although some difficulty was encountered in controlling the patient, some of the figures show that he was in reality able to concentrate which would indicate, according to the work of Meyer, that the cause of the malady lies in the pituitary gland (or at least central) rather than in the kidney. On a normal diet he excreted 9.18 grams of NaCl in 6120 cc. of urine. This shows a concentration of approximately 1.5 (1.47) in one thousand.

After the ingestion of a normal diet plus ten grams of salt, the output amounted to 12.36 grams in 6400 cc. of urine. This gives a concentration of 1.87 grams per thousand cc. The patient was then given 20 grams of sodium chloride in addition to his regular diet and he excreted 19.32 grams in 6500 cc., making a concentration amounting to 2.92 per thousand cc. For the four days preceding the collection of the specimen which gave the high concentration just mentioned, the patient had been receiving between 9 and 12 grains a day of desiccated pituitary gland (whole gland). An attempt was made also to study the urea concentrating power of the kidney. On normal diet, the urea output was 13.172 grams in 24 hours, this being 2.4 grams per thousand cc. At the same time the patient was given 10 grams of sodium chloride, he was given also 5 grams of urea and he excreted 4 grams in addition to his normal output.

It seems justifiable to assume, in view of the above observations, in spite of the fact that we have negative head findings, that this patient is suffering from diabetes insipidus, due to some trouble in the pituitary gland, probably of the nature of a hypopituitarism although he has no somatic indication of it (no genital disturbance, no increase of fat, etc.).

Meyer classifies the polyurias as follows:

(A) *Primary Polydipsia,* which occurs in the insane, paronia and also in hysteria. In this connection he mentions a young boy who was of rather nervous type who passed about 8 liters a day. Under strict supervision they were never able to determine the source of the fluid he drank, although they felt sure that he was obtaining fluid not accounted for, because of the great variation in the daily output of urine and also of variability in the specific gravity.

(B) *Primary Polyuria,* under which is classified true diabetes insipidus. Of the latter there are two varieties. The *Idiopathic* and the *Central.* Diabetes insipidus of central origin may be caused by cerebrospinal lues, cerebral tumors, especially of the hypophysis, meningitis, and trauma. E. Frank mentions a bullet wound in which the bullet was found in the region of the sella turcica, the patient showing increase of fat, diminution of sexual power and the urinary findings of diabetes insipidus.

Newark mentioned a case with the following post mortem findings: Tumor of the infundibulum extending through the lamina terminalis between the frontal lobes backward into the third ventricle and destruction of the neuro hypophysis pars intermedia and also the pineal body.

In considering the differential diagnosis of polyuria, it is necessary to rule out first of all diabetes mellitus and convalescent polyuria (such as occurs after typhoid). Next we must consider polyuria due to some anatomical lesion, such as: Contracted kidney, pyelitis, tuberculous kidney, urinary stasis which may be due to a large prostate (one case of which showed a urinary output of seven liters daily) or due to the pressure of a uterine tumor in which as much as 5000 cc. have been passed in 24 hours. Also it is necessary to rule out certain nerve conditions, such as developmental troubles, disease of the glands of internal secretion, cerebrospinal syphilis and psychic conditions. The polyuria due to this latter cause has a very great variation in the daily output of urine.

Before going on to the various theories in regard to the disease, we wish to mention one clinical fact which seems to be of rather great importance. In diabetes insipidus, the urinary bladder may undergo a marked dilatation and it is not uncommon for a person suffering from this disease to pass as much as 500 to 800 cc. at one time, or even more. With even a very marked distension, there may be no discomfort.

Various observers have suggested the following theories:

1. Lack of ability of the kidney to concentrate the urine.

2. A primary polydipsia occurs with a normal kidney function.

3. That it is a polyuria purely symptomatic in origin, produced by stimulation of the kidney by many causes.

Finkelberg and Forschbach and Weber think that the concentrating power of the kidney is not lost but that the kidney, under pathological stimulation, excretes larger amounts of urine. Schwenkenbecker adds that the kidneys and the body as a whole may have acquired a certain tolerance for water, similar to that exhibited towards certain drugs.

Engle thinks that it is a prolonged nerve stimulation, possibly in the medulla, which results in the stimulation in the glomeruli to a greater secretion or inhibits the absorbing power of the tubules, or both.

Stuber thinks that the condition may be an adrenalemia; Frank and Motzfeldt both favor the pituitary gland as the seat of the trouble; Frank asserts that the condition is due to a hyper-secretion of this gland and Motzfeldt to diminished secretion.

Camus and Roussi were able in dogs to completely remove the pituitary body without the production of polyuria. Later in the same animals, by the production of a lesion in the floor of the third ventricle, they were able to bring about a prolonged polyuria.

F. A. Matthews experimentally showed that the first effect of pituitary extract was a marked contraction of the kidney with a decided decrease in, or suppression of, urinary secretion, for fifteen or twenty minutes, followed by a dilatation of the vessels of the kidney with a marked diuresis. He succeeded in inserting a piece of rubber dam against the posterior lobe in two dogs, each of which developed a typical diabetes insipidus. This caused no destruction of the gland as the wound healed by first intention. The dogs became fat and lazy and were typical of a hypopituitarism, so the lesion would appear to be an irritative one that would cause a hypersecretion. He asked the question, "Would a prolonged hypersecretion cause a constant dilatation of the vessels of the kidney?" The dogs appeared to be unable to utilize fat and sugar properly. Both showed enormous deposits of fat in all the organs.

In concluding, we must state that the more one reads the literature on this subject, the more confusing the subject becomes. The result of the work of one observer is found to be denied by another. When we stop to think that the field of operation in all this experimental work is extremely small, it is not difficult to understand that contradictory results may be obtained. For example, Eric Meyer points out, in experimental work upon the pituitary body, it is practically impossible to avoid injury to the sympathetic system and it is known that the irritation to this set of nerves does produce polyuria.

In regard to prognosis, one may say that this is good in regard to life but very poor in regard to ultimate recovery.

Treatment: In those cases of polyuria due to some determinable cause (such as urinary stasis) it is obviously important to treat this cause. Also, in certain cases of basilar syphilis, an excellent recovery is brought about by the appropriate treatment. In mental cases, persuasion has been tried but without much effect. Also, in these cases a very few have tried hypnosis but this has not been used often enough to allow conclusions. The diet is somewhat important and it is necessary to try to omit foods containing salt or foods which produce urea. Meyer states that a vegetable diet tends to cut down the urine. After dieting for a time the tolerance of the kidney seems to be raised. Also it is advised to be especially careful about the evening meal, so as to insure a good night. The majority of observers find that the patient improves on the administration of extract of the pituitary gland. Motzfeldt administers at bed time a hypodermic of the extract of the posterior lobe or six or seven fresh ox glands, also at bed time. This tends to reduce the polyuria at night. As time goes on, the dose may be reduced and the full effect be obtained, possibly because the gland has had a rest.

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DISCUSSION

DR. ALBERT B. YUDELSON said that the polyuria which is not infrequently present in the organic psychoses is easily differentiated from diabetes insipidus

in that the qualitative and the quantitative changes in the urine of the former are so markedly different from those in the latter. Disturbed metabolism resulting from disease of the central nervous system or vasomotor changes in the kidney caused by psychoneurosis, produce a polyuria. But the polyuria is transitory. In melancholia and depression, oliguria is common.

Qualitatively, indican and acetone are often found in the urine of general paretics and in cases of melancholia, indicating metabolic disturbances due to malnutrition; while albumin is not an infrequent finding in the urine of organic psychosis, delirium tremens, epilepsy and acute mania. None of these substances are found in the urine of diabetes insipidus patients. Again, they are free from psychic or mental disorders.

As to the differentiation between a plain polyuria and a true diabetes insipidus, Ekhard showed that a simple hydrouria occurs if the nerves to the liver have been divided previous to excitation by mechanical, electrical or chemical stimuli. The main problem lies in the determination as to the causative factor in diabetes insipidus, and workers are divided in their opinion for the lack of uniform findings. Then arises the question: is the polyuria due to the indigestion of large quantities of fluids induced by thirst, or is the polydipsia due to the excessive secretion by the kidneys of essential body fluids? Lesions of the pituitary body, we are told, produce polyuria. The successful removal of the hypophysis, wholly or in part, shows that the effect on animals is the production of apathy, muscular twitching, spasticity, rapid respiration, polyuria highly alkaline urine without albuminuria or glycosuria. In man, tumors of the anterior lobe of the pituitary body most commonly produce quite different symptoms. Lesions experimentally introduced in the posterior lobe of the pituitary body, which is an outgrowth of the third ventricle of the brain and has no glandular structure and is probably rudimentary in vertebrates, have been known to produce a polyuria and excessive thirst. Yet it is evident that the seat of thirst sensation is in the epithelium of the throat and the mouth, the peripheral nerves of which perceive the sensation the same as sensory peripheral nerves are sensitive to pain. Brachet has shown that thirst sensation is transmitted by vagal paths; also, patients afflicted with atresia of the esophagus readily quench their thirst by holding water in their mouth.

But assuming that centers of hunger and thirst are localized in the third ventricle or in some part of the hypophysis, anencephalic human monsters, having but the pons and medulla, crying at birth, are readily quieted by nursing.

The question as to whether renal nervous disorders may be responsible for polyuria, can be approached on the consideration of both the nerve and the vasomotor supply of the kidneys. The vaso-constrictors of the kidney arise in the dorsal tract of the cord. In the dog the anterior spinal routes from the fourth dorsal pair to the fourth lumbar contain vasoconstriction fibers for the kidney. These vascular fibers, after piercing through the ganglia of the sympathetic chain, run to the solar plexus and thence to the renal plexus by the splanchnics or other paths. We may judge by analogy that secretion of urine is under the control of the nervous system the same as is gastric secretion; the latter proven by Pawlow.

The work undertaken by the essayists was indeed very difficult. And the solution of the problem presented, he was sure, would be awaited with intense interest by all engaged in this work.

Dr. Goldsmith, in closing, said that by certain experimental work done by him, it had been found possible to produce a greatly increased polyuria, without an increase in the intake.

CHEMO THERAPY IN TUBERCULOSIS*

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Tuberculosis, being one of the oldest recognized diseases, has been given more time, study and research work than any other disease.

It was long believed to be a transmissible disease, but not until 1865 was this proven conclusively. After this advancement was made, nearly 20 years elapsed before the infective agent was discovered by Koch, who was able to isolate, describe and cultivate the micro-organism which is now recognized as the causal agent of tuberculosis.

Several types of this bacillus have been demonstrated, but I have only been interested particularly in two—the human and bovine types. These are very similar in habits, effects and appearance, and I think any remedial agent that would affect one would have the same result on the other.

The structure and composition of this thing seems to have baffled all our efforts to apply some remedy to destroy it without destroying its host.

I have devoted some time to cultivating them and watching their growth, but I do not know in what manner they propagate as it is impossible to see them until they are fully developed.

I believe the commonly accepted theory is, after they have gained admission or entrance in the animal system they are immediately attacked by the leucocytes, and should the attacking army be greater and stronger than the invaders, they

*Read before the Southern Illinois Medical Association, Nov., 1919.

entrench themselves within an impregnable wall and remain as tubercles until such time as there is a more favorable opportunity for them to make further invasion.

When the body's power of resistance has been lowered sufficiently by any other cause they break down this wall and come forth with greatly increased forces or numbers and go on until the tide of battle turns against them again, this being repeated until finally their forces have increased and numbers multiplied sufficiently for them to carry on their battle to a victorious (for them) ending.

Heretofore our efforts have been along the line of building up the body's power of resistance and keeping these things penned in until they give up all efforts of multiplication and destruction, and we have an arrested case of tuberculosis.

In test tube experiments it is a very easy and simple matter to introduce some chemical solution which will prevent further growth and actually destroy the bacilli, but bringing the destructive agent in contact with them in the live body is altogether a different proposition. There again the agents which are capable of destroying them in the test tube are also generally able to destroy the live body as well.

The very thing that caused the discovery of the tubercle bacillus is, in my opinion, very likely to cause its downfall or destruction, and that is its staining qualities. We all know it is very difficult to stain this thing owing to its fatty and waxy construction, but once it is stained it retains the stain even when treated by acids, so is recognized as an acid fast bacteria. I have always found that one that is stained is either dead or devoid of power of propagation. This has led me to numerous experiments with dyes and combinations of dyes and I finally settled on a violet dye of the rosanilin group as being the one most suited for my purpose.

In test tube experiments with this solution I can prevent growth entirely or stop it at any stage, but as previously remarked it is a simple matter to do these things in test tubes, whereas it is more complicated to do the same things in a live body.

In looking over the habits of the now recognized tubercle bacillus and being unable to determine its manner of propagation, I have come to the conclusion that the formation of the tubercle is not merely an entrenchment or protective resource it has or that propagation takes place in these tubercles, but I think the formation of these tubercles is one of the steps in propagation and the spores or spawn or whatever term we wish to apply is formed in these tubercles and, providing the field is right, these tubercles break down and growth takes place, and while this growth is taking place destruction of the tissue takes place accordingly.

Now if we can get a remedy in contact with this inoculated field which will prevent the growth of the destructive things, there is not going to be much destruction, or, not knowing just when this bed is going to be inoculated with the substance which causes their growth, we can apply some remedy which renders the field sterile, there is not going to be much growth or much destruction. This thing happens in a test tube, and I am using it in living bodies and getting results, so I have reason to believe the same thing happens there.

I use from 75 cc. to 150 cc., according to size and weight of the patient, intravenously every four weeks, and have given probably a thousand injections, and never had a reaction, similar to those obtained from the use of tuberculin, from any of them.

There is no nausea, sickness or inconvenience of any kind noticeable following these injections. Patients get up from the table and immediately enter the dining room and eat as heartily as they do at any time. Some of them get on cars and ride 20 to 50 miles right after the treatment with no inconvenience whatever.

Numerous blood counts taken before and several days after treatments show a decided difference especially where the red is very low and the white high. We find the red increased and the white lowered. I have only had one case where both the red and white counts were unusually high and the temperature was also very high. This case was a school girl 13 years old, and all the time she had the very high temperature never complained of feeling sick or seemed to suffer in any manner, and the temperature never varied and it was taken at all times. I had several men look over this case with me, but we could not account for a steady temperature of 104.2° day and night and the patient not complain about feeling sick in any way. Clyde Jones

made a blood count in this case for me and he was so surprised at the high red count he made another one to check by and, getting the same results, attributed it to some trouble in the liver. The girl had this temperature for eight weeks and the first and second injections had no noticeable effect, but the day after the third one the temperature dropped to normal and she made a splendid recovery and in four months went home and is now attending school every day. I have never been able to account for that temperature and I have never seen or heard of a similar one.

This solution has an undeniable germicidal action, as has been demonstrated repeatedly by using it as a local dressing in infected wounds.

One of our local surgeons had a mine injury case where a young man 20 years old was crushed, fracturing his pelvis and rupturing the urethra. Perineal and suprapubic incisions were made and the bladder drained from both places. This patient developed a general toxic condition with temperature ranging from 100 to 101 deg., was delirious nearly all the time and boils broke out on his body and face. I don't know how many he had at one time, but he had eight on his face at the time the doctor asked me if I would give an injection of this solution. I had all preparations made for my vacation, but gave him the treatment before I left. I was gone two weeks and when I returned the patient was able to sit up in a chair while his bed was being made, and there was no signs of a boil. The attending surgeon is in this audience and, I think, will substantiate my statements.

Another case of infection was a man who had his knee cut by a threshing machine while threshing wheat, and the other men very obligingly filled this cut with grease from the machine and cobwebs from the wheat shocks, to stop the bleeding. About 9 days later he was brought to the hospital with a bad knee.

Several long, deep incisions were made and free drainage obtained and it kept on draining. I do not know the kind of dressings employed, but I know that there were some half dozen other incisions made around that knee, and an x-ray showed necrosis of head of tibia, part of patella and condyle of femur. The attending surgeon was very much dissatisfied with the progress of the case, and fearful he would not only lose the leg but lose the man. At his request I gave him some of this solution and he used a large glass syringe and injected it in all of the openings he had made. Within five days the discharge had practically stopped and the man is getting along splendidly. He now sits up a little every day, and the doctor is satisfied he is not only going to save the man's life, but also the leg.

This digression from the subject probably seems out of place, but I cited those two particular cases because they were not my own, and both of them were very serious cases, and both showed such splendid results which could in no way be attributed to anything else but the solution used, and to show also that it has real germicidal properties when administered either intravenously or locally, the solution used in both cases being the same solution I use for the treatment of tuberculosis.

UROGENITAL TUBERCULOSIS*

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This paper attempts a brief, practical review of tubercular infections of the urogenital tract. One or more organs of this group often are affected apparently without being secondary to pathology elsewhere in the body. This condition, however, is only apparent, as the original focus, usually in lung or bone, may be "latent" and cannot be demonstrated clinically. Therefore, if the infection involves but one locality and is diagnosed before extension, proper procedures give hope of permanent cure. The class of cases of which I shall speak are the early ones, those with indefinite, obscure symptoms. The diagnosis of the late case is obvious, and treatment useless—from the standpoint of cure. The mild types are those in which positive cures can be obtained and to this end all the diagnostic aid we can muster should be used. Local infection during miliary tuberculosis will not be discussed, as the general condition is the important one.

Among the common but most difficult conditions met with in urologic practice is renal tuberculosis. Of all the operations performed upon the kidneys, one-third are for tuberculosis and among 21,000 general autopsies 1 per cent

*Read before the Douglas Park Branch, Chicago Medical Society, Dec. 16, 1919.

had renal lesions. The clinical picture of early tubercular kidney is most closely simulated by a chronic interstitial nephritis, parenchymatous nephritis, or non-specific pyelonephritis. The history of progressive loss of weight and increasing polyuria, are the same in both cases. The chronic nephritic has a low specific gravity urine, no pus, and many hyaline casts. The blood pressure usually is high—the opposite to the tubercular patient. The parenchymatous type usually shows heart symptoms, edema of the face and extremities, and a heavy urine, diminished output with granular casts.

One of the most important factors is the demonstration of the Koch bacillus in the urine. This usually is quite difficult. It is necessary to examine many times in the supicious instance before giving a negative decision. Not finding the germ does not rule out tuberculous infection of the tract. Contamination with the smegma bacillus, which has the same acid-fast staining properties, must be eliminated by special laboratory technique. It must not be forgotten that, first, a patient with pulmonary tuberculosis may have a nephritis without specific (tubercular) infection; second, a patient may have a unilateral tubercular kidney lesion, and also a nephritis of the other side. (This often is toxemic in origin and improves after removal of the more diseased organ); third, a person with pulmonary tuberculosis may have bacilli in the urine without renal pathology—it has been demonstrated that the germ may be eliminated in the urine and the kidneys remain unchanged.

The diagnostic factors are, the finding of the bacillus, the functional capacity of each gland as demonstrated by cystoscopy, ureteral catheterization, and the elimination percentage of dyes (indigo-carmen, phthalein, etc.).

Pyelonephritis (non-tubercular) at first shows all the symptoms that the specific case does, without the bacillus tuberculosis being present. Cystoscopy demonstrates more pus, probable bilateral involment, and the process usually is more acute. The history often points to the acute infections or a chronic cystitis as causative. Culture most often demonstrates colon bacillus.

Other conditions which require differentiation, and having more or less likeness to the tuberculosis picture in some respects are: stone in the kidney, ureter or bladder, chronic prostatitis and prostatic hypertrophy, chronic gonorrheal infections of the urethra or bladder, disease of the female adnexa, and lastly some of the neuroses. The history, local examination, x-ray, and cystoscopy eliminate these.

After this short survey of factors to be thought of, I will outline the case as it usually is encountered in practice. The patient usually is below par, weak on exertion, losing weight, with a progressively noticeable polyuria and pyuria (the 24-hour urine specimen shows the amount), albumin and casts, generally slight in quantity. The urine is acid. The tubercle bacilli may or may not be found by repeated examinations, culture and pig inoculations. It is at this stage that the prognosis is most favorable. A little later, as the ureter or bladder becomes involved, or the infection becomes mixed (B. coli is the commonest contamination) we find lumbar soreness, a marked frequency or tenesmus, and corresponding constitutional symptoms. These last, the fever, chill, and temperature, common to all types of the malady, depends on the size of the lesions and the organs involved. Rarely, one of the primary objective signs is hematuria (papillary tuberculosis). Usually, however, hemorrhage is associated with renal varix, stone or papilloma.

The kidney which is infected secondarily, ascending from the bladder or prostate via the ureter or lymphatics, will, of course, show the more violent urinary signs at once, due to irritation of the structures involved. The intense tenesmus and strangury usually is due to true involvement of the lower urinary passages, the occasionally quite marked symptoms obtain reflexly without corresponding pathology in the bladder or ureter.

The methods at our command for diagnosis, are as follows:

1. A written history, care being taken to ascertain data as to previous illness, local injury, infection in immediate family, and onset and course of disease.

2. A general physical examination, with special attention being given to heart and lungs. A blood pressure reading and blood count is essential.

3. Local examination, including (a) palpation of kidney and suprapubic region, (b) examination as to psoas and lumbar muscular

rigidity, (c) palpation of prostate, testicles, epididynus and vas deferens, (d) bimanual palpation, rectal or vaginal; this sometimes gives information as to the condition of the vesical end of the ureter.

4. The urethra should be examined with bougies for stricture and urethroscoped if there is clinical evidence of involvement.

5. The urine in two glasses is sent to the laboratory for examination. A 24-hour specimen should be taken and examined. Consistent polyuria is evidenced by the amount above the normal 1500 c.c. Specific gravity and acidity are important. Centrifugation, staining and examination for tubercle bacilli next are done. The sediment also is examined microscopically for evidence of nephritis or for other abnormal constituents.

I do not believe in the practice of provocative tuberculin injections preceding examination. It often changes a mild type of infection into a severe one.

Urea estimation is non-important, as variations in normal cases are too frequent. After cystoscopy and separate collections of urine with aseptic technique, counts of leucocytes in the specimens are important as showing the relative irritative reaction of either side. Inoculation of animals (the guinea-pig, usually) may be made from the sediment, thus obtained; in a certain percentage of cases typic tubercular lesions form in from 4 to 8 weeks. Results often are negatived by mixed infection.

The straight tube cultures are made at the time of examination by allowing 5 drops of the urine from each side to fall upon a tube culture. Incubating and plating shows the type of infection. The percentage estimations of the excretion of the various dyes used for functional tests, are done upon the separate urines collected for a certain time. (Routine preparation and aseptic technique are assumed.)

6. *Cystoscopy.* Probably more is shown by the cystoscopic examination than by any other procedure. The routine bladder examination shows whether cystitis, ulcerations, stone or growth be present. The ureteral openings often indicate the side most affected. Beginning tubercles of the viscus are plainly visible if present, but the bladder often remains unaffected for many months.

The perception of the ureteral jet of urine is important. The pale, cloudy urine from a side often is diagnostic. Injected indigo-carmine, eliminated as colored material from either ureter, gives us a very good idea as to the relative secreting power of either kidney. The secretion of the affected organ is faulty, as evidenced by scanty, slow and irregular color appearance in its urine. This phase of the examination is most important, as on the relative integrity of the kidneys depends, to a great extent, the possibility of cure. Phenolsulphonephthalein is a dye which, injected and measured as excreted from the respective sides, gives us the most reliable information obtainable. It is injected in solution intravenously, and the appearance time in the urine from the catheterized ureters noted. A marked delay in excretion from one side is suspicious. The percentages of the drug excreted in one and two hours are an index of the condition of the diseased gland and its fellow. It is not only necessary to show that one kidney is diseased, but that the other is capable of carrying all the load of elimination in case of operation. Total low dye elimination is an absolute bar to operative procedure of any sort, excepting abscess drainage.

In obscure cases the pelves of the kidneys often must be injected with an opaque material—silver salts or Thorium—and an x-ray examination made. This will show changes in the size and shape of the kidney pelvis and calyces. The radiographic plate demonstrates stones in the tract, often secondary to infection. Sometimes an enlarged kidney will show, which fact when added to our data, may be important.

By the various procedures mentioned we may now, in the given case:

1. Eliminate systemic disease.
2. Localize the type of infection in the upper urinary tract.
3. Determine the amount of involvement of the organ or organs and their probable capability for regeneration.

The treatment depends upon our knowledge of all the conditions. The conservative method, even in early cases is not to be recommended as a small percentage only recover without recurrences. The usual general hygiene, forced diet and climate may, however, be a valuable adjunct to our treatment.

Urinary antisepsis is of little practical value

in this condition. Nephrectomy is indicated in cases with either slight or advanced pathology, if the other gland is normal or but slightly affected. If both kidneys are infected, one being pyonephrotic, drainage is indicated no matter what the condition of the other. At a later time, after the septic absorption is decreased, the patient may be in condition for its removal. The ureter should be removed if possible. The less infected organ often improves greatly after the operation. A badly infected bladder also recovers after the source of infection is removed. Toxic, non-tubercular nephritis in the remaining gland also is invariably benefited by operation. The "danger time" is immediately after the operation, when the kidney left is trying to accommodate itself to the excess load of excretion. For this reason the utmost in the way of pre- and post-operative care is essential.

Tuberculin may be used as an adjunct to the general build-up process. I have found it of some value in specific-tubercular-cystitis. The following is a brief report of a case which came recently under the care of Dr. G. Frank Lydston and myself:

Patient, Male, aged 26 years, weight 115 pounds, height 5 feet 9 inches. Has been ill for six months, very weak, anorexia, slight dysuria, slight day and night frequency. Some dull pain in back. History of intermittent pyuria, improvement and relapse. Has slight (101°) afternoon temperature at this time. Leucocytosis 11,000.

Examination: Patient emaciated. Chest and heart negative. Muscles of the right lumbar region slightly rigid; deep tenderness in corresponding side. Kidney palpable, enlarged and tender. Radiographic examination was negative. No tenderness over bladder. Genital organs—testes, prostate, and vas, negative. Urethra negative. Urine clear; 1012 specific gravity; few pus cells, and no growth on culture.

Cystoscopy showed a normal bladder fundus, but a slight trigonitis. The left ureteral orifice appeared normal—clear urine in jet. The right opening appeared slightly retracted, and pale rather than inflamed. No urine could be seen coming therefrom. Injected indigo-carmine showed from the left side in eight minutes. No color from right side. Left side catherterized. Right side blocked. Phthalein excretion (left side) 48 per cent in two hours.

Diagnosis. Closed kidney lesion, pyonephrosis, right side (probably tubercular). Nephrotomy advised, to be followed later by nephrectomy.

The nephrotomy was performed and followed by drainage. Three months later nephrectomy was performed. The kidney was greatly enlarged, with typic multiple abscesses and caseating foci. Microscopic examination showed tuberculosis with mixed pus infection. Recovery was uneventful.

In conclusion permit me to emphasize the fact that the keynote of surgical efficiency in urogenital tuberculosis is early and accurate diagnosis. As a corollary, it is evident that all suspicious cases of urogenital disturbance demand early urological investigation by thorough examination, utilizing all the technical methods afforded by modern urological surgery.

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CONVULSIONS IN INFANCY AND CHILDHOOD*

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Inasmuch as the greatest progress in treatment has come from the recognition of the fact that spasms and convulsions in infancy and childhood are merely a symptom of a most diversified number of underlying causes, it becomes necessary to approach this subject with an etiological classification. The causes may be arranged under two general groups; the chronic predisposing causes and the acute and exciting causes as follows:

GROUP I—THE CHRONIC PREDISPOSING FACTORS.

1. Conditions accompanied with demonstrable lesions of the nervous system. These may be of acute or slow onset and febrile or afebrile.
   a Acute onset and with fever.
      (1) Meningitis with its symptom complex-vomiting, headache, rigidity of the neck and anomalies of pulse and respiration.
      (2) Acute encephalitis, cerebral abscess.
      (3) Septic sinus thrombosis.
   b Acute onset and without fever.
      (1) Embolism, cerebral thrombosis. (Existing heart condition, this often being the first symptom.)
      (2) Meningeal and cerebral hemorrhage.
         a Birth trauma, syphilitic arteritis.
         b Older children: spastic cough attacks, head injuries.
      (3) Cerebral hyperæmia, spastic cough, congenital cardiac defects.
      (4) Internal cephalæmatoma.

*Read before the Northwest branch of the Chicago Medical Society November 2, 1918.

c Slow onset, afebrile, often existing from birth.
(1) Chronic internal hydrocephalus.
(2) Microcephaly, porencephaly, cerebral hypertrophy.
(3) Cerebral and spinal tumors accompanied by focal symptoms, especially cortical tumors, tuberculosis, syphilis, manifested often as diffuse and disseminated cerebral sclerosis.

2. Conditions unaccompanied with demonstrable lesions of the nervous system.
a Spasmophilia.
b Genuine epilepsy.
c Hysteria.
d Congenital and hereditary influences and tendencies.
e Nervous system of the infant *per se* due to its morphological peculiarities.

GROUP II—THE ACUTE PREDISPOSING CAUSES WHICH INTENSIFIED MAY BECOME EXCITING FACTORS.

1. Toxic Influences (Hematogenous) with or without a spasmophilic soil.
a Poisons generated from without.
(1) Drugs, as alcohol, strychnia, lead, arsenic, phenol, opium, etc., may be effective through the breast milk or wet nurse.
(2) Food poisons (ptomain, etc.).
b Poisons generated from within.
(1) Acute infectious diseases; scarlet, measles, pneumonia, influenza, etc.
(2) Products of intestinal putrefaction and decomposition.
(3) Products of defective internal metabolism, as uremia (post scarlet), diabetic, acetonemia, asphyxia and terminal Co2 poisoning (as in bronchiolitis), lithiasis, cholemia and Addison's disease.

2. Reflex Irritations (probably causal or operative *only* when a latent or active spasmophilic diathesis exists). These are numerous, the most important ones being: Difficult dentition, intestinal parasites, colic, constipation, acute indigestion, rectal and anal fissure, middle ear disturbance, foreign bodies in ear, intussusception, urolithiasis, phimosis, painful dermatosis, nasal affections, adenoid vegetations, burns, injuries and, in fact, even the slightest sensory irritation may cause a seizure.

In view of the above and before entering into the discussion of the pathogenesis and etiology of convulsions, one fundamental principle underlying this phenomenon should always be recognized, namely—the determination of a convulsion depends upon the reciprocal relationship existing between the exciting cause and the underlying condition of excitability of the nervous mechanism. In other words, for an occurrence of a convulsion, you must have both an adequate liberated stimulant and an adequate receptive state of the central nervous system. The nervous system must be tuned up, as it were, to the necessary pitch of excitability. An attempted explanation of this law has given birth to many theories. The most important will be briefly cited.

At first the cause was assumed to be due to the morphological, physiological and psychological peculiarities of the childish organisms or nervous system. Then came Soltman's hypothesis that the inhibitory function is not developed or becomes effective before the period of man. This was followed by the autointoxication hypothesis, dealing with bacterial toxins, then the theory of Kassowitz that it was a concomitant symptom or sequela of rachitis, and still later Baume and Fere felt it was merely a special form of epilepsy. Later investigations of Tachanoff, Lemoine, Fleischman and others supplemented by the conception of Thiemich, Heubner and Finkelstein have established as a clinical entity a condition known as the "Spasmophilic Diathesis" which accounts for the occurrence of a goodly number of convulsions in infancy. This may be defined as a condition of infants and young children characterized by a measurable hyperexcitability of the central nervous system with a tendency to tonic and clonic spasms. This manifests itself in heightened reactions to mechanical and electrical stimulation, and by a tendency, clinically, to laryngisimus stridulus, carpopedal spasm (tetany) and convulsions. The mechanical hyperexcitability is readily obtained by tapping the branches of the facial nerve over the cheek. If positive, there is a twitching of the muscles supplied. This is known as Chvostek's sign. The electrical hyperexcitability is tested for with the galvanic current. The so-called Erb's phenomenon is a cathodal opening current contraction with less than a 5-milliampere current. Trousseau's is elicited by constricting the arm; the fingers then take on the obstetrical position, the hand is flexed on the the wrist: in other words the same position that is obtained in the more severe cases in which the carpopedal spasm appears without this pressure.

The diagnosis in general of convulsions of infancy and childhood is, obviously, the determination of the underlying etiological factor or factors. As general convulsions have no characteristic features to distinguish them, the type can only be definitely determined by close observa-

tion of the seizure, the taking of a careful detailed history dating from birth and a complete and often times repeated physical examination in the interim of the attacks. This includes the routine use of the ophthalmoscope and the taking of the child's electrical reactions. In fact, given a case with a history of repeated seizures, I firmly believe that the child should be hospitalized for three or four days in order to better establish a diagnosis. Lumbar puncture is of value, especially in prolonged convulsions, as it not only clears up a meningitis or cerebral condition, but it has a therapeutic value in relieving cerebral pressure which nearly always exists. Frequent repeated convulsions with fever in a previously healthy child suggests meningitis. Repeated seizures with little or no fever suggests rickets. Repeated non-febrile spasms not induced by a tetanized state speak for epilepsy. The reflex irritations mentioned above especially dentition and worms, are not, *per se*, the cause of the attack but generally light up a tetanized or spasmophilic baby.

In infancy; First ruling out cerebral conditions which are generally afebrile, except meningitis, frequently but not always showing signs of regional involvement limited to one side; likewise the toxic influences, and remembering that epilepsy is the least probable at this period of life, we have left for consideration the spasmophilic type. The conception and recognition of the spasmophilic diathesis is essential because of its frequency and because of the favorable outlook for effectual treatment. Convulsions, true eclampsia infantum, are only one of the manifestations of spasmophilia and the recognition of the other clinical forms such as laryngospasm, tetany or rotary head spasm, often occurring in the interim, is of the greatest value in differential diagnosis. The spasmophilic state may be active or latent, occurring, generally, in overfed, doughy or rachitic infants, rarely in breast fed, most often from 4 months to 20 months, rarely after the second year. Tend to recurrence, often as many as 20 a day, and are more prone to occur in the late winter and spring months. Fever never occurs in uncomplicated spasmophilia and is always indicative of the associated infection. Chvostek and Trousseau signs are positive; likewise an increase in the electrical irritability. While many theories have been advanced to explain this condition, it is largely considered at present to be due to a disturbance of the calcium metabolism or the parathyroid secretion or both. It has been shown that the Ea. and Mg. salts are inhibitory in their action in the body and the Na. and K. salts are exciting. When this equilibrium between these groups is disturbed, a spasmophilic state exists.

In older children: After ruling out toxic and cerebral cause, we must differentiate hysteria, epilepsy and latent spasmophilia, the latter by searching for the transient clinical manifestations mentioned above, especially the Chvostek sign, and for a disturbed electrical reaction which by the way has not the same standard of value in milliamperes as in the infant. Epilepsy and hysteria are not so easy. The presence of the stigmata of degeneration, a violent sudden onset with a cry or fall, if patient injures themselves and the urine and feces are evacuated involuntarily, if followed by a prolonged sleep and there is no recollection of its occurrence and if there is a change in the type of plantar reflex one hour after the attack, it was probably epilepsy and not hysteria.

Prognosis: This depends exclusively on whether the convulsions are merely the manifestation of an overexcitable nervous system or are the initial symptoms of organic meningeal or brain disease. With each convulsion the inhibitory control is lessened and each succeeding attack requires less cortical irritation that its predecessor. One convulsion may change the entire future of the child causing spastic paralysis or idiocy or both. Serious in the new born and in advanced childhood, when unduly prolonged or recurrent and with marked prostration, weak pulse, stupor or cyanosis. A convulsive onset of cerebro-spinal meningitis is a bad omen, likewise those due to an enlarged thymus; on the other hand the convulsive kind of other acute diseases are rarely fatal. Tobler points out the permanent injuries that are liable to become manifest later in life when children have convulsions early. He says that only one-third of the spasmophilics grow up normally, another third are mentally backward and the rest show signs of a substandard nervous system. Twenty per cent of the causes of epilepsy have their origin in so-called simple infantile convulsions (Gowers). In an intensive study of 80 cases,

Collin and Revon showed that the ultimate prognosis is governed by the character of the spasm. Clonic spasms are benign; tonic are of grave import, and are the expression of some actual lesion of the cell. These later develop epilepsy or hemiplegia, or succumb to an attack of meningitis or encephalitis. Therefore, with any tonic phase developing in the course of a convulsive condition, the prognosis should be guarded.

Treatment: This is necessarily that of the casual factor. Attending a case of convulsions one should have in his equipment chloroform, morphin, a solution of chloral hydrate, containing a definite number of grains to the dram, a soft rubber catheter and a hypodermic syringe. For the immediate relief of the convulsion, chloroform is the best sedative and can be used even in the youngest infant. Likewise, the hot mustard bath or preferably the mustard pack, and washing out the bowels with a soap and water enema, not a saline. These discharges should be saved to be examined later for parasites, foreign bodies, etc. After the enema, instill into the lower bowel the solution of chloral hydrate dissolved in an ounce of milk, compressing the buttocks to retain it. Give 4 gr. for 6 mo., 6 gr. for 12 mo., 8 gr. for 2 years. Repeat in one hour if necessary and anyway at intervals of 4 to 8 hours until all tendency to spasms ceases. Chloral should act in 20 minutes. If it fails to do so or if in the beginning, the heart seems weak, I prefer the hypodermic use of morphin, 1/50 to 1/16 gr. according to the age. Other routine methods are; the taking of the temperature, ice to the head; noiseless room; the cleaning out of the intestinal tract as soon as feasible with a cathartic, preferably castor oil; and a low diet for a few days.

Because of its frequency and the good results obtained when properly managed, the treatment of spasmophilia deserves special mention. Prophylactic methods are of the first importance. One should be on the alert for the signs of latent tetany in bottle fed or rachitic babies so as to ward off spasmophilia. This can be accomplished by an early regulation of the diet. Change to breast milk or if this is not possible, reduce the amount of cow's milk to ½ or ¾ litre a day in a child 6 to 18 months of age. Give orange juice for the retention of the lime salts; likewise, add cereals and a vegetable soup containing greens and carrots. The treatment of an existing spasmophilia has to do with (1) the control of the spasm by methods cited above, always avoiding the exciting Na. and K. salts such as salines and the bromides. (2) A persistent, consecutive management of the interval between the attacks in order to maintain a proper equilibrium of the mineral metabolism of the Co. and Mg. salts on the one hand and the Na. and K. salts on the other. This is medical and dietetic. Give Ca. Co_3 or Ca Lactate 15 grs. every 4 hours. The taste can be disguised fairly well with an aromatic ammonia preparation. Phosphorized cod liver oil made up fresh, 1/100 gr. of phosphorus to the dram, should also be given. Dietetically, little or no cow's milk, preferably a whey free mixture such as albumin milk, cereals and the foods referred to under prophylaxis are in order. The alkalies should not be given. Lastly these cases should be under observation till all traces of the diathesis disappear as shown by the electrical reactions.

In conclusion: I wish to emphasize the necessity of an early and definite determination of the true underlying etiological factor and the value of a persistent, consecutive treatment and observation of the convulsive child during the interim of the seizures.

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GONORRHEAL ARTHRITIS*

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I want to show you this evening a case of gonorrheal arthritis.

Patient had first attack of gonorrheal arthritis in June, 1914. I saw him for the first time at the Alexian Brothers Hospital, where he was under the care of a well known urologist. Joints

*Read before Chicago Urological Society, February, 1920

involved were: right and left wrists, both ankles, both feet—his knees were not affected.

He stayed in the hospital nine weeks, after which he recovered sufficiently to resume some light work, but he never was able to perform as much as before his first infection.

In the spring of 1917, he had a second attack of gonorrheal urethritis. He came to the G. U. dispensary of Rush Medical College, where I was assistant instructor.

His re-infection was immediately followed by acute gonorrheal arthritis. Joints involved were all those mentioned in first attack (1914), but chiefly his wrists, and in addition, both knees, which were very painful and swollen.

Not being able to treat such a case in the dispensary, I requested him to come to my office gratis, because he could not afford hospital care.

Treatment: Injections with silver salts, later prostatic massage, stripping of seminal vesicles; irrigations with K Mn 0 4.

In addition I made use of plenty of sunshine in 1917, by prescribing prolonged sunbaths.

Result: In the fall of 1917 patient was able to do some light work. However, all the joints previously involved were in worse condition than after his first attack in 1914.

At the end of September, 1918, patient returned to my office with third acute gonorrheal urethritis. Condition was very bad, he looked ill; had fever; all joints previously involved were very painful and swollen, chiefly both wrists, ankles and knees.

Next day he was hardly able to move around. The weather being very unfavorable, I advised patient to return to hospital, where he was under the care of a well known urologist.

In addition to other treatment his right knee and left ankle were put in casts during six weeks —his left leg in extension. He left the hospital December 23, 1918, not recovered, but of his own volition. Was not able to stand on his feet; had much pain and had to use crutches.

April 3, 1919, patient came to my office on crutches—seven months after his third attack—asking me if I could do something to relieve pain, etc.

Patient looked ill, was not able to stand on his feet, had lost 44 pounds since September, 1918.

Examination showed gonococci in discharge; both urines very cloudy; prostate and seminal vesicles in very bad condition; joints very painful and swollen.

Having read an article by Dr. A. T. Horovitz of Cincinnati, about the treatment of acute, subacute and chronic gonorrheal infections with proteogens, I asked the patient if he wanted to take a chance. He was willing to try anything, was the answer.

April 4, 1919, I gave 1^{cc} Proteogen N° 11 intramuscularly in the gluteal region. This dose was too large. I should have started with 6 or 8 mms. gradually increasing till full dose (1^{cc}) was given.

Reaction was severe; followed by chills, fever and increased pain in all joints involved. Patient stayed home for five days, after which he came daily to my office, with a few exceptions.

During this treatment patient gradually recovered. His recovery, however, was not uneventful. He had a severe cystitis, was unable to hold his urine, and frequently had increased pain and swelling in the joints involving chiefly his knees, ankles, big toes and left wrist. After each crisis he felt improvement, however. His urine became clearer and clearer. He dispensed with the use of his crutches, used two canes, later one cane, and soon without any.

In July, 1919, he started to do some light work for a few hours a day. In September he got a regular job, earning $3.50 a day.

During all these months I made use of Proteogen N° 11 exclusively. I did not use any other medicine to relieve symptoms.

After tonsillectomy by Dr. Walter H. Theobald in St. Lukes Hospital, I changed in September to Proteogen N° 2, three times a week.

These infections often become a mixed type. I therefore use No. 2 because it acts chiefly on the streptococcus rheumaticus.

In addition I massaged his prostate and seminal vesicles and applied the electro thermophore to prostate and vesicles.

Patient is now well, all his joints previously involved are normal. He is here to be examined if anybody wishes.

I would have you understand that I am holding no brief for the Proteogens. I am simply stating the cold clinical facts as they have transpired in my practice.

I was able to get excellent results, not only in

this case, but in several other cases of acute, subacute and chronic gonorrheal infections.

DISCUSSION

DR. GUSTAV KOLISCHER: The theory of any specificity in any preparations for the sequallæ of local infection was exploded a long time ago. We know it does not make any difference what kind of end or split product is used, it will occasionally in a number of cases influence the so-called gonorrheal arthritis or streptococcic infection very favorably.

Joe Miller made an extensive series of experiments at the Cook County Hospital and reported very good results from the injection of Proteogen. It is absolutely immaterial whether you inject milk, an enzyme, the white of an egg, or bacterins. Any time you introduce into the system heterogenous albumen, especially that which contains any split or end products, you get a certain reaction, and this intense reaction will lead to local improvement. But there is absolutely no good reason for thinking that there is anything specific in these preparations.

DIFFICULTIES AND FAILURES IN THE SLUDER TONSIL OPERATION*

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Were it not a fact that a fair percentage of the laryngologist's work consists in tonsil enucleation, I would feel like apologizing for presenting a paper such as this one, as there is little real surgical science in it, but a good many practical points.

The Sluder technic, having been fully described many times by Sluder and others, mentions particularly the application of the method in routine work, but fails to mention the reasons for difficulties and failures and their correction, except in a few instances. What is meant here by the Sluder method of tonsil enucleation are those points in the operation which the author brought out several years ago, and which I shall mention briefly: (1) the Sluder tonsillotome; (2) the jaw as a point of resistance; (3) forcing the tonsil through the ring with the aid of the index finger; (4) separating the tonsil from its bed. The author of the method lays down certain exact rules for the performance of the operation and if followed in the main, these rules will yield excellent results.

Before taking up the subject as the title suggests, I will state that, in my opinion, after many years of tonsil enucleation by the Sluder method, I consider the operation the quickest, safest and most thorough of any yet devised. It is owing to criticism of the technic that I feel that a short paper upon the difficulties and failures, as I have found them, might be of some advantage to those who are less persistent or who lack initiative when abnormal cases present themselves for operation.

In an average of 100 cases, the tonsils can be enucleated successfully to the extent of 97 per cent. For the remaining 3 per cent, one less familiar with the technic might advocate the dissection method, but with operators who are thoroughly familiar with the technic even these tonsils can be removed satisfactorily. In the foregoing abnormal cases, I do not mean to say that the most skillful operator can remove the tonsil intact at the first attempt, since it frequently requires two or three efforts before the fossa is clean. The difficulties presented in some cases are due to four causes: (1) variations of the inferior maxilla and its aleveolar eminence; (2) the Sluder tonsillotome as found on the market; (3) abnormal tonsils when considered in the anatomical sense; (4) the operator lacking the proper skill in manipulating the instrument.

THE SLUDER TONSILLOTOME

The original Sluder tonsillotome, in my experience, is the best, and no modification that I have seen has any particular advantage over it.

The reasons why modifications seem necessary for some, are that many operators have not the strength in their hands to do good work. This was made more difficult by the teaching of Sluder, who recommended a dull blade.

After my first few cases of enucleation, I decided that dull-bladed tonsillotome was wrong, since it did not lessen hemorrhage enough to offset the advantage of a much keener edged instrument. I do not advocate a razor blade tonsillotome but rather a compromise between a very sharp edge and a dull one.

Another reason for difficulty in the operation from the standpoint of an imperfect instrument, is that most of the instruments on the market have a thick blade and are not ground thin enough at the knife-like end; as a result, greater force is necessary. Another minor consideration in regard to the tonsillotome is the sliding blade,

*Read before the American Academy of Ophthalmology and Oto-laryngology at Cleveland, Ohio, October, 1919.

which must be loose fitting; just tight enough to prevent the blade from sliding home of its own weight when held in a vertical position. I think many operators who have trouble in not having strength enough in their hands, could do much better work if the points mentioned in regard to the instrument were taken into consideration. The most frequent cause of failure is not getting the tonsil intact; and the point that Sluder so forcibly emphazises, is holding the handle almost at a right angle to the jaw, after bringing the tonsil upward and forward before pushing the blade home.

ANATOMICAL DEFECTS IN THE ANGLE OF THE INFERIOR MAXILLA

The inferior maxilla is frequently the cause of imperfect results in tonsil operations, owing to anatomical deviations from the normal. The most difficult type of jaw for enucleation of the tonsil is the one in which the jaw has a small alveolar eminence or where it is altogether absent. These inferior maxillas are almost in a straight line with the neck. I do not know of any reason why the operation should present such difficulties except on account of the alveolar eminence being smaller or absent. This prevents the instrument from being held in a firm position, hence the difficulty of keeping it at the correct angle when pushing the tonsil through the ring. In order to overcome this, the tonsil must be dislocated much farther forward.

In jaws of the foregoing type with elongated tonsils, which are most difficult for a good enucleation, the tonsil should be dislocated more forward, and more horizontally; the teeth interfere with any outward movement. In adults, the large tonsillotome should be used because it will insure a more perfect result, although the small instrument will suffice for the majority of cases. It is in these cases that it is often necessary to make a second effort in order to get a perfect result.

To avoid a failure, I would advise that in cases where this type of jaw is recognized, palpation of the region of the alveolar eminence and peritonsillar tissue be made before operating. Another type of anatomical anomaly encountered, is an elongated styloid process of the temporal bone. This condition, while infrequent, does occur, and recently was a cause for failure in one of my cases.

Should the tonsil be difficult of dislocation with the instrument, it would be a good plan to discontinue the enucleation; and instead palpate the tonsil and peritonsillar region and finish the operation by the dissection method should the elongated styloid process be discovered.

DEFORMITY OF HARD PALATE

This condition is so rare that it is scarcely worth while mentioning, but the fact that I had this sort of case and presented it,after the enucleation of the tonsils, to the Ear, Nose and Throat section of the St. Louis Medical Society, proved that even here good results can be obtained, and is my reason for calling your attention to it. The difficulty in such cases is that the hard palate is apparently longer and lower than the normal, and this allows the soft palate to lie at a lower level.

ABNORMAL TONSILS WHEN CONSDIERED IN THE ANATOMICAL SENSE THE ELONGATED TONSIL

This class of tonsils mentioned previously in relation to the anomaly of the inferior maxilla, is frequently found with the normal jaw; and while not as difficult of removal as when found in the abnormal jaw, is much more difficult to remove than the average tonsil, owing to the fact that it is closely attached to the pillar, is flat and usually firmly imbedded. Failure here is usually caused by the operator using the small-sized instrument and because not enough force is used in order to dislocate the tonsil. In using the small-sized instrument, especially in adults, one almost invariably finds that one has failed to get the lower pole, and this necessitates a second attempt, though this is easily executed.

THE INFILTRATED TONSIL

In these cases, which result usually from repeated attacks of tonsillar and peritonsillar inflammation, one of the main causes for failure is that many operators do not wait long enough after an acute attack for resolution to occur. I think six weeks should elapse before attempting the operation, and generally at that time the tonsils can easily be removed. Occasionally one encounters cases in which there have been many attacks of tonsillar and peritonsillar inflammation at frequent intervals; even in case resolu-

tion does not occur, one is obliged at times to operate. In these cases, an enormous infiltrate, especially involving the anterior peritonsillar tissue, is found, which feels almost as hard as cartilage. These cases are by far most difficult for the Sluder method, but despite obstacles, the operator can remove the tonsil successfully if he uses great force and slowly massages the tonsil through the fenestra with his thumb.

SUBMERGED TONSIL WITH THICK MUSCULAR PILLARS

This form of tonsil is often difficult to remove at the first attempt and is made especially so when operating under local anesthesia. Owing to the usually small-sized tonsil, to the dense adhesions and muscular pillars, much force is necessary to dislocate the tonsil. After dislocation, the tonsil should be fed through the fenestra slowly, by gentle pressure of the thumb instead of the index finger. The thumb yields greater pressure, and the whole tonsil can be pushed through while the handle of the instrument is firmly held.

ATROPHIED TONSIL

Here we find a small tonsil separated from the anterior pillar for quite a distance and also a short distance from the posterior pillar. In these atrophied tonsils which are often badly diseased, many operators class them for the dissection method in preference to the Sluder technic, because of the danger of buttonholing the anterior pillar. These tonsils are just as easy to remove as any others, provided one uses a good deal of force, quickly applied so as to dislocate, and by holding the handle of the instrument firmly at a right angle; then by gentle, constant pressure with the thumb or index finger, the blade is pushed home and the tonsil comes away with its capsule. There is one kind of tonsil I shall mention, the Lobulated Tonsil, although not frequent, and in which, if the operator is not careful, the operation will result in failure. Failure here is due to the operator examining the enucleated tonsil instead of the tonsillar fossa. In this type of case, one finds that he gets an almost perfect tonsil except that a very small section is missing, and if the section is not removed, at least one-half or even one-third of the original mass is still in situ.

EXCAVATED OR WORM-EATEN TONSIL

This type is not difficult of removal if the edges of the tonsils are not very adherent, but in case they are firm and adherent, so that it is almost impossible to make out the line of attachment to the pillar, removal is difficult. This difficulty can be overcome by separating the adhesions of the anterior and posterior pillars, although I have very rarely found it necessary to dissect the pillars from the tonsil.

There may be other difficulties in working with the Sluder instrument, but in the above paragraphs I present the results for comparison and discussion.

219-223 Metropolitan Bldg., St. Louis, Mo.

DISCUSSION

Dr. T. E. Carmody, Denver: I have been using the Sluder technic for a number of years. I don't use the molar eminence to force the tonsil through. I always use the index finger. I also saw Johnston use the thumb and I sometimes use that. In using the index finger you can use more of the plica than when using the molar eminence. You can draw the tonsil forward and not only get the edge of your pillar but the plica. Black says he does not use a dull blade. I have always used the dull blade except in my first few cases. He speaks of turning the instrument at right angles to the jaw because you can always get the lower lobe. It is also easy to force the rim of the instrument between the lower and middle lobe because there is often a fissure between them. You can also find one between the upper and middle lobe, which is frequent in the rabbit. You sometimes miss the upper lobe by using too small an instrument.

As. Dr. Black says, we sometimes fall down after a great many years of experience. Dr. Black speaks of the elongated styloid process: I know nothing about it. I have never run against one. He also speaks of waiting long enough after an acute inflammation; that is the principle we should go on and it doesn't make any difference what method we use. In the case where we have an inflammation, it will take much longer in healing and there is a possibility of spreading the infection from the second tonsil to the first tonsillar fossa, where the tonsil has been removed.

In taking them out too early, recovery is long delayed The peritonsilar infiltrate which we have and which may remain for some weeks, makes it very difficult to force the tonsil through. In the so-called worm tonsil you may have difficulty in forcing through the whole of it, because it is the so-called rotten tonsil where our technic is poor. It is because a certain amount of it is soft and has granulation tissue which you may leave behind. I have had very little difficulty since I have mastered

the technic, but once in a while I fail. A thing I find of great value following tonsillectomy, no matter what methods you use, is blowing orthoform into the tonsil fossa after removal. It does away with pain and it seems to hurry resolution. In one case I had a membrane which looked like a diphtheritic membrane. In this case I gave ten thousand units of antitoxin. The report was negative for diphtheria, the next day.

Dr. Wm. S. Tomlin, Indianapolis, Ind.: I want to add just a word to this extensive discussion, from some personal experiences and observations. I wish first to call attention to the technic in cases where we have a more or less recent peritonsillar abscess or where by examination or palpation we feel sure there is a peritonsillar focus of infection. In those cases I find it highly advantageous to make a small incision through the plica and then, when your pressure is applied, mop up the tissues in order that you may not get an inspiration of this infectious discharge. The extra lymphoid tissue outside of the tonsil is not a myth. It not only grows at the base of the tonsil but you will find it inside the pillars and yet outside the capsule, and whether you have used the snare or the Sluder, it is a useful thing to inspect carefully and see that there is none of this tissue left. Remember that under that lymphoid tissue there has been a focus of infection and your patient will not get the results you expected. I have frequently observed that onlookers who are not favorably inclined to the Sluder are likely to criticise if you fail to remove the whole tonsil in one movement. At the same time, if you see this man operate with his snare, he not infrequently goes back with his snare to get another piece of his tonsil tissue and doesn't charge it up to the operation.

Another thing, there is on the market an exceedingly useful instrument, a sharp curved sponge holder. Remove your left tonsil first and with the sponge in this curved holder let it slip around the cheek and hold the sponge in that fossa and the assistant and the sponge are out of the way.

One point about the bleeding, we ran a series of cases with dissection and snare and modified Sluder, they were all done by students but under supervision. The bleeding was in favor of the Sluder and I think this was due to the fact that it took less time.

Dr. J. A. Stucky, Lexington, Ky.; Comparisons are odious. We have been comparing the Sluder operation with two or three others. It doesn't make any difference what method you use, the one thing I want to call attention to mentioned by the essayist is, do not remove your tonsils if your patient has one or more degrees of temperature. I have been taking tonsils out for 25 or 30 years. You are going to meet a "Waterloo" sometime, and one of the saddest things you will come up against will be a post-operative cellulitis without any cause except that there was a little localized inflammation in the tonsil at the time you operated, and your patient's temperature was one hundred. I make it a rule in my private practice and my clinical work, if the child has a temperature of one hundred, to not take the tonsil out until it subsides.

Dr. G. W. Spohn, Elkhart, Ind.; At every meeting of Otto-Laryngology there is a paper on "The Sluder Method."

At least 75 per cent of the laryngologists use some other method (not the Sluder) for the enucleation of tonsils. If the "Sluder method" is the desideratum sought, then it needs no boosting.

Briefly, the tonsil is a gland that can be shelled out the same as any other lymphatic gland. Separated from the pillars, it can be shelled out the same as a hickory nut is shelled out of the husks. The use of the Sluder instrument, or any other sharp-cutting instrument, will cause much hemorrhage.

Will the essayist answer whether he has more or less hemorrhage with the use of the suction apparatus?

The painting of the tonsil region after operation with a 25 per cent solution of the Tinct. of Iodin will act as a styptic and prevent infection.

Dr. Irving W. Voorhees, New York City: The last word will never be said concerning tonsils. About a week ago a general practitioner called on me and said he would be glad to have me do his tonsil work, but he did not want tonsillectomies. "I have charge of a number of industrial concerns," he said. "We have about seventeen thousand cases a year, and during the 'flu' epidemic last year we kept careful tab on all the cases having influenza which developed pneumonia afterwards. We found that in all cases of pneumonia following influenza the patients had had a complete tonsillectomy. We believe that tonsillectomy lessens the patient's resistance and the infection is more apt to reach the lung. Therefore, when we send you a case, do a simple tonsillotomy." I did not know what to say to him, because rhinologists are agreed upon complete enucleation of the tonsils and we have learned to believe that it is the only safe operation. Should we pay any attention to this general practitioner's observations or not?

In reference to technic, mine is similar to Dr. Black's and some of the other gentlemen here, that is, I push the tonsils through the ring with the index finger. You should have short finger nails or you may buttonhole the anterior pillar. In some cases there is almost a dead space at the superior pole of tonsil. Sometimes, with a little too much pressure there, you get the anterior pillar. Usually amputation of the anterior pillar is due to the Sluder ring being too large. We should first attempt to judge the size of the tonsil we are going to remove and use a ring somewhat smaller than the tonsil itself. If you are careful to put your tonsillotome across the mouth, get the tongue out of the way and use suction so you have a clean field, then it is possible to push the tonsil through the ring and strip it out with your

finger. I prefer a dull blade. As to the disappointment on the following day in finding some of the tonsil still present, I think it is unfair to many operators to say that they have not done a good tonsil operation. Many of us have thought we had removed a tonsil but this lingual tonsil at the inferior pole has worked up in position to fill up the cavity made by the enucleation. I am not sure that we must necessarily take out the lymphoid tissue at the base of the tongue, since no actual "tonsillitis" can arise from an infection of this tissue. One ought to retract the pillars with a hook and inspect the tonsillar fossae thoroughly before returning the patient to his bed.

Dr. Sidney Israel, Houston, Texas: So far as the amount of blood lost is concerned, when compared with tonsillectomy by dissection, you will agree that it is greater than when the La Force, Beck or Sluder instrument is used. On the other hand, one thing I have experienced under local anesthesia, particularly, is that there is a certain amount of shrinkage from the astringent effects of the injection of novocain and adrenalin in the lower pole of the tonsil; whether you call it tonsil, or lymph tissue, there is a good deal of shrinkage. I have noticed this tissue below the tonsil before the tonsil has been anesthetized and during the removal of the tonsil in capsule. The next day, or as soon as the shrinking of the tissues from the novocain and the adrenalin has disappeared, on examining the throat you notice a piece of lymph tissue in the base of the fossa when you thought you had removed it all. There, in my opinion, is one of the largest obstacles to overcome with any ring instrument and it has been therefore necessary in our work to make a special effort to remove that piece of lymphoid tissue at the base of the tongue, after the tonsil has been removed in order to have as clean and smooth an appearing fossa as possible.

Dr. H. V. Dutrow, Dayton, O.; No one, I believe was more prejudiced against the Sluder method than I several years ago. I had used the combined method, namely, sharp dissection and snare, with a great deal of satisfaction. I think I tried out every new ring instrument that came on the market. I had the original Sluder instrument, but could not force it home with my thumb. I also used the Braun instrument, and one devised by Dr. Beck, and one by Drs. Vail and Lamb of Cincinnati. At the 1917 meeting of the American Medical Association, held at Chicago, I saw the Sluder instrument with the lever on the handle, which I felt would make up my deficiency in the use of the original Sluder instrument. I had Mueller send me the two sizes of this instrument, and I was able to use them with a great deal of satisfaction. I think it is like every other good thing, it has its limitations. I think it by far the best instrument on the market for children and young adults. There is considerable skill necessary in acquiring the technic to use this instrument.

In a great many cases we have peculiarities in the shape of the lower jaw and the shape and position of the tonsil and the manner in which it is held between the pillars. You have to find your alveolar eminence or some other prominent place to afford something to press against in order to cause the tonsil to evert and force it through the ring of the instrument. No matter how careful a man's technic with the snare may be, especially in children, he will now and then get out a section of the posterior pillar resulting in a deformed throat. With the Sluder instrument you do not get into the muscle fibres of the superior constrictor. You look into your fossa and find that it is smooth and the fibres of the aponeurosis are intact. The snare will cut through everything that gets in the wire loop. Personally I think the day is coming, and that day is not far distant, when the snare will have a very limited place in tonsil surgery. It will be either the Sluder or sharp dissection entirely. If you cannot use the Sluder instrument, learn to operate with a knife or scissors, and possibly the snare in snaring off the inferior lobe.

Dr. E. M. Seydell, Wichita, Kan.; I wish to mention that piece of tonsil tissue, termed by some the lingual lobe, which is not removed by the Sluder instrument. We have frequently seen severe inflammations of this tissue, when it has been left, and we now excise the lingual lobe after removing the tonsil proper, a curved knife or scissor being used for this purpose. We found great danger in injuring the anterior pillar with a resulting adhesion to the tongue, where the snare alone was used for this part of the operation.

Dr. W. D. Black (closing discussion): I thank you gentlemen for the discussion, but do not believe I can answer all in the time allotted to me.

Dr. Carmody spoke about not utilizing the alveolar eminence at the inner angle of the jaw. I frequently do not use it myself, but I believe those nearning the operation should follow the steps laid down by Dr. Sluder, the author of the method. After one becomes proficient, he can then modify it to suit his own ideas. You cannot follow the Sluder technic and not use the eminence. In my technic, I often do not utilize the alveolar eminence after dislocating the tonsil. The instrument should be brought up at a right angle and held there.

Dr. Carmody spoke of not being able in a few instances to get out the whole tonsil with the Sluder instrument. Of course, there are some cases that are very difficult, as I mentioned in my paper, and other cases where there is some anatomic anomaly, such as a deformed hard palate or an elongated styloid process. In these cases, you cannot use the ring instrument but will have to resort to the scissors or your finger.

Now, there is one point I would like to bring before you and that is the position of the patient. Some have the head hanging over the table and some have the patient in a sitting posture. Of course, with such positions, it is almost impossible to do a good operation. In my work, I have the patient's head on a level with the body, with the chin extended a little. Another cause of failure is that the average table in the operating room is too high and too broad. Owing

to the height of the table, one cannot get the correct position to enucleate the second tonsil satisfactorily. This can be obviated by changing to the opposite side of the table and work from there.

In gas anesthesia, there is necessity for great speed and I would not recommend it for the beginner. Ether is much better. Someone in the discussion said he had 100 per cent perfect results with a snare. This percentage to me is unbelievable, because even the best operators only claim 98 per cent, and I doubt very much whether these 98 per cent men use the snare method.

Of course, at some future time, we may be able to get 100 per cent perfect results. So far, we are close to it, but it will probably be some new technic or new instrument and at a time when we have no anatomic anomalies. I believe it would be a good idea for most snare operators to learn the Sluder technic thoroughly and when they fail to get the tonsil intact with a snare, to remove the small pieces with the Sluder tonsillotome. With this instrument there is no reason why one should not get out the smallest possible piece after he becomes proficient with its use.

Another gentleman in discussion spoke of the lymphoid tissue at the base of the tonsil as being the lower pole. Of course, this is not the lower pole. It is a separate structure, lymphoid in character, that grows from the side of the tongue, has no crypts and does not get infected, consequently it is not necessary to remove it unless it interferes from the mechanical standpoint or reflexly. Someone mentioned that they would not use a sharp-bladed instrument. I mentioned in my paper that I do not use a razor blade or a dull blade, but an intermediate blade, so to speak. We know that by using a sharp knife, the blood vessels are more apt to contract quickly and consequently there will be less hemorrhage. Even in using a sharp-bladed instrument with this method, I do not see any danger, as there is nothing of importance to cut, if the operation is done correctly. There is absolutely no danger of injuring the internal carotid artery with this method. I have never had to sew a pillar owing to severe hemorrhage, but I have had some brisk bleeding occasionally, which can usually be stopped by pressure on tonsil hemostats. Of course, should these fail, I would advise sewing the pillar.

I thank the gentlemen for the discussion of my paper.

ADENO-CARCINOMA OF THE OVARY IN A FIVE YEAR OLD GIRL*

O. W. KNEWITZ, M. D.
EAST ST. LOUIS, ILL.

The adeno-carcinoma is a malignant tumor, probably always secondary to an adenoma; which itself is an epithelial tumor of a secreting type and the most closely allied of all benign tumors, to the carcinoma.

An adenoma probably on the breaking down or proliferation of tissue forms this conglomerate tissue or mixed tumor adeno-carcinoma. But, be that as it may, we shall leave that part tonight to the pathologist and bacteriologist, the bees of the medical profession.

Being a tumor of glandular structure, its favorite site is naturally the stomach, especially the pyloric end; also the ovary, breast, prostate, uterus and pancreas.

It is found in three forms: Simple, Medullary and Scirrhous.

If Simple, it is composed mostly of glandular tissue, i. e., the proportion of stroma to cells is as you usually find in most glands; if Medullary the cells are in excess and the tumor is soft; if Scirrhous the fibrous stroma is so developed that the tumor is very hard and the epithelial cells are few.

The tumor shown here is a mixed adeno-carcinoma, or one showing these different tissues in various proportions in different parts of the tumor.

Although we are somewhat averse to the criticism of nature, nevertheless when we are confronted with a 5 year old girl, who is menstruating and who has a mammary gland development that would ordinarily be found in one thrice that age, we at once feel that some pathological condition is present, that somewhere there is error.

While adeno-carcinoma is not at all an uncommon malady past middle age, yet this tumorous growth in a mere child of five years, who otherwise seems apparently healthy, is indeed rare.

Just when this tumor started is merely guess work now. No doubt, however, it is due to some misplaced epithelial cells in fetal life, as at the age of two this child already manifested some pathological derangement, which farther history shows, caused more or less contained disturbance until date of operation.

Surely early in life it started as a small papillary cystic type, which now showed degeneration of tissue and hemorrhage, and is almost a solid type of new growth of epithelium into connective tissue; which is additional evidence of malignancy, i. e., carcinomatous transformation and as it is microscopically recognized as: Adeno-carcinoma.

*Read before the Southern Illinois Medical Society, November, 1919.

Pfaundler and Schlossman: (p. 342) "Adenoma is the most important epithelical tumor in childhood." (p. 247) "Carcinoma need hardly be considered in children."

Lexler says: "The adenoma are benign polypoid growths mostly of loose connective tissue."

Keen, VI, 131: "Continued observation on malignant ovarian tumors convinces me, that primary cancer or malignant epithelial tumor of the ovary has not been demonstrated."

Keen, I, 840: "Primary carcinoma of the ovary is certainly rare, but common secondarily, where it is primarily found in the breast, gastro-intestinal tract, gall-bladder, etc., it is then usually bilateral." Keen goes on farther and states, that where one ovary is involved and the other apparently normal, usually before long it also becomes involved and has to be removed at a later operation.

D. C.—born July 16, 191b, the oldest child of a family of three.

Family history negative as to syphilis and tuberculosis.

The child had bronchopneumonia at two years and whooping cough at four. At two years of age the child suddenly complained of severe abdominal pain in the right side, simulating appendiceal colic.

The following day she menstruated, which continued for five or six days. The acute pain returned at irregular intervals and at times rather severe during the following three weeks, after which she was apparently well.

The child during the next two and one-half years would often during play, suddenly stop and run to her mother, complaining of severe abdominal pain, which on lying down would almost always be relieved at once.

August 4, 1919, was called to see the child; who had been suffering severely for six hours. Menstruating. Temp. 99.2, pulse 132. Abdomen distended, more so on right side and extremely tender to touch. On palpatation found a rather distinctly outlined, movable, hard tumor mass to the right of the umbilicus.

After further examination I noted markedly enlarged mammory glands. Also the child had put on an unusual growth the past three months; such as is commonly noted about puberty.

I told the mother it was strictly an operative case; however to my amazement, when I returned the following day; I found my little patient in the yard playing with the other children, the mother saying, "It was only one of her regular spells, just a little unusually severe."

Temp. now 100.4, puse 118, and suffering little inconvenience. On placing the child in the reclining position, again I could plainly outline movable mass.

The menstrual flow continued almost daily until the consent for operation, September 13, 1919. * * *

The tumor was removed through a three-inch incision, in the median line, below the umbilicus. After the child was anesthetized the tumor could easily be outlined and moved to any part of the abdomen; however its favorite site was to the right of the umbilicus.

Outside of a very small omental adhesion, it had no other attachment, except its pedicle.

Although no positive diagnosis was made previous to the operation, we were however satisfied that there was right ovarian involvement, as we had:

1 site of tumor on right side

2 menstruation (vicarious)

3 markedly increased mammary development

4 unusual growth as is otherwise noted at puberty only.

The uterus and left ovary were apparently normal, as were the other abdominal organs.

This child made an uneventful recovery thus far and in three weeks was about playing with the other children.

Last but not least, the one thing of most interest in this case is the prognosis. According to statistics, unfavorable, not forgetting our blood and lymph channels; yet nevertheless, with a tumor so completely encapsulated without any adhesions, save a minor one to the omentum; does not the prognosis seem favorable? Time only can tell.

PNEUMOPERITONEUM AND X-RAY EXAMINATIONS.*

B. H. Orndoff, A. M., M. D.

CHICAGO.

In this article, I wish to discuss briefly our experience with the technique used for producing pneumoperitoneum one hundred times and to tell some of the findings noted by x-ray examination in these cases. In addition, I wish to present some illustrations showing some particular phase of technique or pathology whose detection is facilitated by the use of this method of diagnosis.

Pneumoperitoneum indicates the presence of a gaseous medium in the peritoneal cavity.

After producing pneumoperitoneum on animals by various methods, I decided the safety of the procedure was sufficient to warrant its use for diagnosis in the human. Our first cases were given small amounts of air, but little diagnostic possibilities were observed. After the third case a modification of our technique added very

*Read before the Chicago Medical Society, Nov. 5, 1919.

greatly to the possibilities of obtaining valuable diagnostic data and with the encouragement of not having experienced untoward reaction in the previous cases, we used sufficient amount of air to render the work successful. While our first case was attempted in January, 1919, our first real successful case was not done until June. My first knowledge of this work having been done, other than in our own laboratory, for diagnostic purposes, was early in September. Since that time, I have learned that foreign literature indicates the work was done in Europe for more than ten years and that the first published report of work done in America was that of Drs. Stewart and Stein.

TECHNIQUE.

The apparatus which I wish to describe was assembled in our laboratory for this work and I will endeavor to give a brief but detailed description. It consists of a tank of gas (oxygen), a water bottle indicator, a pressure gauge, rubber tubing with cotton filter, needle, etc., as shown in the illustration. It will be observed when the oxygen flows from the tank, it will pass through the water bottle indicator and then through the cotton filter and finally through the needle. The pressure gauge is set in the circuit so that it records the pressure existing in the line between the needle and oxygen tank. The purpose of the gauge is to indicate any variation of pressure that would occur when the flow of gas from the needle is obstructed. The principal purpose of the water bottle indicator is to determine the rate of the flow of oxygen. The spinal puncture needle in common use was selected for this work. The patient is placed on an ordinary hospital cart, facing upward and before an upright fluorescent screen apparatus where examinations may be conducted with the x-ray passing laterally through the abdomen on a horizontal plane. The site for inserting the needle is selected by palpating the abdomen in order to find an area free from induration and other evidence of pathology in the abdominal wall. It is also well to select an area under which there seems to be normal air filled loops of intestines. The site is prepared by applying a solution of 50 per cent. Lysol and Glycerine by means of a wooden applicator wrapped with a small amount of cotton. Some pressure is added to the applicator, which facilitates the antiseptic preparation of the field and produces some local anesthesia. A local anesthetic is now introduced at the point where the pressure was made. With the apparatus all assembled, the pneumoperitoneum needle is now introduced through the skin and carefully down through the various layers of the abdominal wall. The principal points of resistance noted after passing through the skin is the deep fascia and finally the peritoneum. After a little experience one learns to note quite certainly when the needle passes into the peritoneal cavity. The gas is now allowed to flow carefully from the tank. The water bottle indicates the rapidity of flow desired. The pressure gauge will show whether the oxygen is flowing from the needle unobstructed. If the pressure continues to rise, it is certain that the needle is still in the tissues of the abdominal wall or that the flow is obstructed by an abdominal viscus, etc. The flow at the tank may be stopped and the needle turned or its angle changed until the pressure in the line is seen to be released. Then, the oxygen is permitted to flow from the tank again and when the rate noted in the indicator and the pressure gauge remains uniform, it is probable that the gas is flowing into the peritoneal cavity with the needle unobstructed. As soon as a few ounces of gas has entered the peritoneum the x-ray observations will show its presence as a long narrow line beneath the anterior abdominal wall and extending up over the surface of the liver, which is easily recognized. The gas is allowed to flow slowly until the anterior abdominal will is lifted away from the abdominal viscera for a distance of five to ten centimeters. The needle may now be withdrawn and the site of puncture covered again with the antiseptic solution and applicator. The patient is now placed in various positions and observed by the x-rays. It will be noted that the viscera surrounded by the gaseous media show very clear outlines on the screen. The position of the patient should be such as to permit observation of the organ from different angles in order that all its surfaces may be observed. The normal mobility of the organ may be ascertained and in many instances it may be palpated by external, vaginal or rectal palpation. X-ray films may be made in order to have permanent record of the findings appearing on the screen.

SUMMARY.

From our experience with the technique described and in consideration of the illustrations, I feel the following summary is warranted:

1. Pneumoperitoneum is not difficult to produce and while a few important points in technique are essential, they require no special training other than the training of a physician.

2. The size, position, mobility, relative density, variations in contour, contents and cavities of the abdominal viscera can be visualized and studied in a manner which opens to physicians entirely new possibilities.

3. Findings are encountered which seem to invite the conclusion that the basis for possibly new clinical disease entities have been established.

4. Peritoneal adhesions between abdominal viscera and the anterior abdominal wall are demonstrated without difficulty. The importance of the functional pathology originating from this source will be studied carefully by the workers in this branch of medicine.

5. Fixation of the gastrocolic omentum to the anterior abdominal wall is frequently accompanied by the symptom of vomiting with or without nausea. In seven cases the symptom was relieved by pneumoperitoneum and returned when the gas was absorbed.

6. Perihepatitis, perispleenitis and pericolitis with fixation by peritoneal adhesions to adjoining viscera offer new phases for the study of functional pathology of these organs.

7. After pneumoperitoneum has been produced aid in diagnosis is offered by filling of the colon, stomach, intestines, bladder, kidney, etc., with oxygen. Variation in the diameter of the walls of the hollow viscera with changes in relative density and the presence of new growths may be detected.

8. Postoperative peritoneal adhesions to the anterior abdominal wall may be prevented by keeping the peritoneal cavity distended with oxygen for a few days following operative procedures.

9. Pneumoperitoneum produced with oxygen probably possesses therapeutic virtue in peritoneal tuberculosis.

In concluding this paper, I wish to express my sincere thanks for the helpful co-operation received from Drs. O. M. Walter, C. C. Rogers, A. E. Stewart and many of the attending physicians to the Frances Willard Hospital.

25 E. Washington Street.

Special Article

PROGRESS OF SANITATION, MEDICINE AND SURGERY IN THE LAST 70 YEARS

The following is a partial record of achievements in Medicine, Surgery and Sanitation during the last 70 years:

General:

Lister's employment of carbolic acid in antiseptic surgery, October 15, 1867.

Esmarch's method of bloodless surgery, December 1, 1873.

Koch's discovery of the Bacillus tuberculosis, May 20, 1882.

Prophylactic treatment of rabies by injections of virus, August 19, 1882.

Koch's discovery of the comma bacillus of cholera.

Miller's employment of cocaine in eye surgery, Oct. 11, 1884. The first reports of the use of cocaine in this country were made by C. R. Agnew, W. O. Moore, and J. L. Minor in the issue of the *Medical Record* of October 18, 1884.

Intubation of the larynx, February 21, 1885.

Koch's announcement of the preparation of tuberculin reported in the cabled proceedings of the Berlin International Congress, August 9, 1890.

Discovery and experimental use of tetanus and diphtheria antitoxins announced in a special telegram on December 6, 1890.

Finlay's theory of the relation of mosquitoes to the spread of yellow-fever, Nov. 24, 1894; confirmation of this theory by the U. S. Army Commission, November 3, 1900.

Relation of mosquitoes to the spread of malaria, Sept. 21, 1895.

Roentgen's discovery of the X-rays, April, 1895, an X-ray plate of the hand published Feb. 15, 1896.

Cosmetic employment of paraffin injections, Apr. 13, 1901.

Mme. Curie's discovery of radium, May 3, 1902.

Discovery of the dysentery bacillus as a cause of the summer diarrhea of infants in this country, Sept. 13, 1902.

Wassermann reaction described June 2, 1906.

First report of American cases in which salvarsan was given in syphilis, made by M. S. Kakels, Sept, 24, 1910.

Histology and Embryology are now on the curriculum of the freshmen and sophomore years of all medical colleges.

Physiology and chemistry have become allied sciences rather than independent fields of investigation.

Fresh air treatment for tuberculosis.

Seratherapy.

Apparatus for electro-endoscopic examination.

Countless new surgical instruments.

Endovenous infusion.

Endocrine medication.

Specific Fields:

Surgery:

Steam sterilization in surgery introduced by V. Bergmann, 1886.

Surgical asepsis in surgery introduced by V. Bergmann, 1891.

Michel's clamp and other devices for the closure of operation wounds.

Esmarch's artificial ischemia, introduced 1873, has now given way to

Spencer's clip forceps introduced by Sir Spencer Wells.

Bier's hyperemia or passive congestion for benefiting diseased tissue through prolonged contact with oxygenated arterial blood.

Local anesthesia by means of an ether spray, 1866.

Infiltration anesthesia introduced by Schleich, 1894.

Spinal anesthesia and local medication of the cord discovered by J. Leonard Corning, America, 1885.

First paper on lumbar puncture and study of Cerebra-spinal fluid by Quinckle, 1891.

G. W. Crile's combination of different drugs on the basis of his experimental research into surgical shock reported in a Cartwright prize essay, 1897.

Advances in surgery of brain and cord; of cancer of the breast; of the stomach and intestinal tract, notably of appendix and rectum; of the liver and gallbladder; the pancreas; the thyroid gland; the senile prostate.

First successful cholecystotomy, performed by L. T. Boggs of Indianapolis in 1867.

First excision of gall bladder by Langenbuch, 1882.

First surgical intervention for cancer of the rectum by Krasse in 1885.

Introduction of exploratory laparotomy and Murphy button.

Intubation of stomach by Kussmaul, 1867.

First successful excision of the pylorus by Billroth, 1878.

Gastroenterostomy introduced by Woelfler in 1884.

Removal of large portions of colon by Sir W. Arbuthnot Lane of England.

"Murphy drop" (in abdominal operations).

Inreatracheal insufflation devised by S. J. Meltzer of the Rockefeller Institute, keeps air in lungs at same pressure as outside atmosphere so that chest can be kept open without any danger of collapse.

Brawer proposed an over-pressure apparatus for the prevention of the dangers and sequelae of pneumothorax.

Sauerbach's pneumatic cabinet, an underpressure contrivance introduced in 1904.

Intubation of larynx by O'Dwyer, 1885.

Fell-O'Dwyer method of few years later.

Direct laryngoscopy introduced by Kirstein in 1894.

Direct bronchoscopy introduced by Killian, 1898.

Artificial respiration described by Matas, 1902.

Anchorage of floating kidney.

Radiographic recognition and extraction of calculi.

Drainage of renal abscess; nephrectomy; intraventions upon the ureters.

First successful removal of renal calculus by Ingalls (Boston); Nov. 8, 1873.

Extirpation of a diseased kidney first performed by Simon, 1869.

First nephropexy by Hahn in 1881.

Introduction of a cystoscope by Nitze, 1889.

Elevation of Pelvis in vesical operations by Trendelenburg.

Goiter surgery has reached high state of development through work of Kocher, Mayo, Payr.

First operation on anenoids, 1868, by Meyer, Copenhagen, Denmark.

Improved method for harelip and cleft palate.

Paraffin injections first employed by Gersuny in 1900.

Orthopedic Surgery:

Modern transplantation methods of bones and joints (Koenig, Lexer and Albee).

Transplantation of skin, Thiersch, early, and Davis later.

Plaster of paris bandages first introduced by Mathyson, Belgian army surgeon, who died in 1878.

Improved and popularized by Hubert von de Loo who survived him 5 years. Sayne's gypsum corset for spinal deformities introduced in 1878.

Vascular Surgery:

Murphy's successful circular anastomosis of blood vessels in 1896.

Carrel's method of vascular anastomosis and tissue transplantation, 1902.

Introduction of Cardiopathy:

First case of heart suture by Farina in 1896.

Extraction of a thrombus from pulmonary artery, after vessel had been exposed and incised, performed first by Trendelenburg in Leipsic.

Transplantation of segments of arteries and veins.

Substitution of the venous for the arterial system (Wieting's operation for reversal of the blood current).

Utilization of veins for drainage of lymph.

Endoaneurysmorrhaphy, the Matas method of intrasaccular suture as applied to the cure of aneurysm.

Preliminary testing of the collateral circulation before attempting any operation upon the arteries by Matas.

Direct transfusion and serotherapy in hemorrhage.

Surgery of Base of Brain: (Harvey Cushing; Hirsch).

Surgery of the Gasserian ganglion in severe trigeminal neuralgias.

Operations on Spinal cord by Gowers and Hersley, 1889.

Forster's operation for locomotor ataxia proposed in 1909.

Intramedullary affections of spinal cord rendered accessible by Elsberg, 1912.

Nerve resection and nerve suture.

Surgical Gynecology:

First successful vaginal ovariotomy by T. Gaillard Thomas in 1870.

Repair of lacerated cervix, by T. A. Emmett, 1874.

Vaginal hysterectomy of cancerous uterus by Mary Amanda Dixon Jones, 1887.

First application ot galvanism to uterine myomata, 1874.

First application to treatment of uterine myomata of Batty's operation of ablation of appendages by Trenholme, 1876.

Valuable modifications of the intraperitoneal method of treatment of the stump, March, 1881.

A series of improvements in the technique of the extraperitoneal method of treating the stump by which introligamentous tumors and those deep in the pelvis can be removed by J. Price and his pupils, 1886.

Total abdominal extirpation of myomotous uterus, by use of clamp (first resuscitation in America of the operation since those of Freud had been abandoned), Lewis, 1888.

First separate ligation of the uterine arteries in their continuity and total extirpation of this method, Stimson, 1889. Method of total extirpation by use of a staff, Eastman, 1889.

Total abdominal extirpation, fastening stump of vagina to abdominal incision, for prolapse, Polk, 1889.

Methods for making the stump intraabdominal but extraperitoneal, Polk 1888, Kelly 1890, Byford 1890, Bear 1892.

Total abdominal extirpation of the uterus with suppurating appendages, as a matter of election, Baldy, Krug, Polk, 1893.

Eucleation of the stump as well as the myoma, by use of a serrated gouge, without severing the uterine arteries, Eastman, 1894.

Total extirpation of uterus in cases of extrauterine pregnancy, where the tube which is not pregnant is diseased, Krug, 1894.

Porro's Cesarean section, with excision of adnexa, 1876.

Freund's extirpation of cancerous uterus, 1878.

Czerny's vaginal excision of uterine tumors, 1881.

Saenger's improved Cesarean section, 1882.

Lawson Tait's operation for extrauterine pregnancy, 1883.

Howard Kelly's hysterorrhaphy, 1887.

Wertheim's radical operation for cancer of the uterus, 1900.

Obstetrics:

Duehrssen's method of vaginal Cesarean section, 1896.

Obstetrical analgesia (through a combination of drugs).

Discovery of latent gonorrhea in the female by Noeggerath, 1872, and the introduction of Crede's silvernitrate instillation for infantile conjunctivitis.

Abderhalden's announcement of the ferment-reac tion in the diagnosis of pregnancy, 1912.

Pathology:

The pathological histology of all eye diseases became a fruitful field of research. The etiology and genesis of acute otitis media were established by German investigators.

Pathology of Respiratory and Related Systems:

Gull described Myxedema in 1873.

The parathyroid glands were described by Sandstroem in 1880.

Important clinical and experimental contributions to the physiology of the thyroid and parathyroids were published by Pineles in 1904.

Sex gland implantation Lespinasse, Nov. 22, 1913.

Testicle grafting for improvement of sex function, skin, circulation, arterio sclerosis, Lydston, March 7, 1914.

Cushing described dyspituiatarism in 1911.

Acromegaly as connected with the hypophyis was discussed by Marie in 1886.

The first case of tumor of the carotid gland was reported by Marchand in 1891.

Pathology of Digestive System:

Articles appeared on tuberculosis of the salivary glands; on esophageal diverticula; peptic ulceration of the esophagus; muscular stenosis; gastric ulcer and cancer; uremic necrosis of the intestine (Treitz) and intestinal catarrh (Nothnagel). The term "inflammation of the bowels," which fifty years ago covered a list of affections has been replaced by the specific terms colitis, enteritis, pelvic cellulitis, peritonitis and appendicitis. The indications for early laparotomy in appendicitis and McBurney's point were first emphasized in 1901. Numerous articles appeared concerning the liver and the pancreas.

Pathology of Uropoietic System:

Important investigations on the subject of Bright's disease, on the origin of cylinders in the urine; on hypernephroma of the kidney (Grawitz), urinary calculus. The suprarenals were recognized as having an important bearing on metabolism.

Regenerative role of bone-marrow in hemorrhage came to be properly understood.

Osteomalacia and rachitis investigated.

Coxa vara studied by V. Bruns, and scoliosis by Albert and Nicoladoni. Anomalies of the bony pelvis were described. Neuropathic arithitides attracted attention of pathologists.

Physiology:

The chemical activation of the sea-urchin's egg by Jacques Loeb startled the scientific world in 1899.

Study of the ductless glands inaugurated by establishment of the fact of internal secretions, by Brown-Sequard, 1891—followed by work of Sajous, 1903.

Action of digestive glands investigated by Pavloff in 1898.

Study of metabolism, led by V. Noorden, began in years 1892-95.

Localization of function in cerebrum established by Fritsch and Hitzig followed twenty years later by Monakow.

The non-fatigability of nerve-tissue demonstrated by Bowditch in 1890.

Phenomena of neuro-muscular fatigue and exhaus-

tion and so-called fatigue-toxins attracted the attention of investigators in this country and in Germany (Weichhardt).

Golgi's staining method of studying structure of Nervous system discovered, 1873—practically applied ten years later.

Neuron theory of Waldemeyer, 1891, rests upon the histological investigations of Golgi, Remon v Cajal, van Gehuchten and others.

Charcot writings on hysteria.

Freund's work on psychoanalysis.

Diagnosis:

Widal reaction in typhoid fever, a practical application of the agglutination-phenomenon.

Serum diagnosis of tuberculosis, syphilis, and other constitutional diseases.

Diagnosis of rabies by Negri bodies.

Cytodiagnosis, based upon microscopic demonstration of cell-contents in various body fluids.

Cryoscopy, or the determination of the constitution of urine by the establishment of its freezing point; variety of methods for the early recognition of gastric cancer.

Bacteriology:

Pasteur's work on pathogenic microbes.

Pasteur's protective inoculations against infectious diseases (chicken-cholera, malignant edema, and hog erysipelas).

Protective inoculations against anthrax and rabies in the eighties.

Discovery of the resistant anthrax spores by R. Koch, 1876.

Improved staining methods and dried blood smears introduced by Ehrlich in 1874 after Weigert's bacterial stain with carmin announced in 1871.

The steptococcus, astaphylococcus, diplococcus of pneumonia, meningococcus intracellularis, colon bacillus, bacillus of rhinoscleroma, bacillus of leprosy, bacillus of influenza, all became known during the last few decades.

Bacillus of leprosy discovered by Hansen, 1874.

Spirillum of relapsing fever discovered by Obermeier, 1873.

Parasitic amebea in dysentery discovered by Loesch in 1875.

Anthrax bacilli first grown on artificial media by Koch, 1876.

Bacillus of malignant edema described by Pasteur, 1877.

Gonococcus discovered by Neisser in 1879.

Strepococcus and staphylococcus isolated by Pasteur, 1880.

Typhoid bacillus isolated by Eberth, 1880.

Amebea of malarial fever discovered by Laveran, 1881.

Epidemic nature of Poliomyelitis discovered by Medin, 1881.

Tubercle bacillus discovered by Koch, 1882.

Bacillus of glanders discovered by Löffler, 1882.

Diphtheria bacillus discovered by Kleba, 1883.

Tetanus bacillus discovered by Nicolaier, 1884.

Colon bacillus discovered by Eccherich, 1886.

Meningococcus discovered by Weichselbaum, 1887.

Bacillus of malta fever, discovered by Bruch, 1887.

Para colon and Para typhoid bacilli described by Gilbert, 1893.

Transmission of Texas fever by cattle tick reported by Smith and Kilbourn, 1893.

Blastomycosis described by Gilchrist, 1893.

Bacillus of Bubonic plague discovered by Kitasato and Yersin, 1894.

Discovery of bacteriolysis by Pfeiffer, 1895.

Discovery of bacterial agglutination by Gruber, 1896.

Widal-Sicard agglutination test for typhoid fever, 1896.

Dysentery bacillus discovered by Shiga, 1897.

Discovery of bacterial hemolysis by Bordet, 1897.

Demonstration of hook-worm infection by Loos, 1898.

Differentiation between human and bovine tubercle germs by Smith, 1898.

Finley's theory of transmission of yellow fever by mosquitoes, conclusively proved by U. S. Army Commission, 1899.

Parasite of sleeping sickness discovered by Dutton and Ford, 1903.

Transmission of the disease by the Tsetse fly shown by Bruce, 1903.

Koch's investigation of African fever, 1908.

Bacillus of pertussis discovered by Bordet and Gengou, 1908.

Wassermann's serodiagnosis of syphilis with Noguchi modifications of the test.

v. Pirquet's cutaneous reaction in tuberculosis.

Calmette's and Wolf-Eisner's conjunctival reaction, 1907.

Flexner's experimental production of poliomyelitis, 1910.

Peyton Ross's successful transmission of sarcoma, with filterable virus, 1911.

Plasmodium of malaria, cultivated in the test tube, by Bass, 1912.

Pathogenesis of many infectious diseases, i. e., tuberculosis, actinomycosis, leprosy, typhoid fever, gonorrhea, variety of forms of cerebrospinal meningitis, pneumonia, enodcarditis and tetanus, established in the last half century.

Organized Preventive Medicine:

First took root in early years of twentieth century.

Sleeping sickness, beriberi, and tropical dysentery, placed under reasonable control.

Yellow fever checked as result of Finlay's belief followed by work of Reed, Carroll, Lazear and Agramonte.

Sir David Bruce's investigations of causes of sleeping sickness and Malta fever, awarded by Leeuwenhoeck medal in 1915, as were those of his predecessors, Ehrenberg, 1875, Ferdinand Cohn, 1885, Pasteur, 1895, and Beyernick, 1905.

Vaccine Therapy and teachings of immunology by Metchnikoff, Wright and others.

Control of hook worm disease in Porto Rico by Ashford, 1903-04; in southern U. S. by Stiles, 1910-12.

Loos showed that the hook-worm larvae penerate the skin, 1910.

Therapeutics:

Discovery of hypnotic properties of chloral-hydrate by C. Liebreich, 1869.

Salicylic acid isolated by Kolbe, 1874.

Polcarpine first recommended as a remedial agent, 1874.

Trypsin discovered by Kühne.

Iodine introduced into surgery by Moorhof, 1880.

Hemostatic affect of the fluid extract of hydrastis canadensis demonstrated in 1883.

Introduction of Ichthyol into medical practice by Unna, 1883.

Antipyrin first prepared by Knorr, 1884.

Cocaine introduced as an anesthetic in eye surgery, 1884.

Antifebrin and acetanalid prepared by Cahn and Heppe, 1886.

Sulphonal prepared by Baumann, 1886.

Salol introduced by Neucki, 1886.

Strophanthus recommended as a substitute for digitalis by Fraser, 1886.

Creosote gained as a remedy for tuberculosis, followed by guaiacol.

Anti-diphtheritic serum introduced by Behring, 1883.

Fischer synthetized caffeine, theobromine, xanthin, guanin and adenin, in 1897.

Heroin introduced by Dreser, 1898.

Erepsin discovered by Cohnheim, 1901.

Veronal introduced by Fisher and v. Mehring, 1903.

Novocain, discovered by Einhorm, 1905.

Announcement by Ehrlich's side-curtain theory and his introduction of salvarsan, 1909.

Gerotherapy, organotherapy and chemotherapy are three distinctive modern weapons in the fight against disease.

Discovery of bactericidal powers of blood serum, by Nuttall, 1888.

Adrenalin, the active principle of the superranals, was isolated by Takamine in 1901.

Recently the use of the spleen and bone-marrow has been recommended in chlorosis, nephritis, pancreas indigestive disturbances, hypophysis in certain nervous diseases, and acromegaly, etc.

The new knowledge of the action of the thyroid on cretinism and goiter and certain forms of obesity and skin disease, constitute a permanent gain in the therapy of disease.

Spirocheata pallida discovered by Schaudinn, 1905.

Heliotherapy dates back slightly over 50 years, but was first placed on a scientific basis by Finsen in 1893.

Heredity:

Mendel's publication of his laws of Hybridization, 1865. (Generally lost sight of until given publicity by):

The simultaneous and independent announcement of the same laws by Tzermak in Austria, Codrens in Germany, and De Vries in Holland, 1900.

X-Rays:

Sir William Thompson's discovery of the electrometer, 1860.

Herman Sprengel devised the mercury air pump, 1865.

Sir William Crooke's announcement that matter is radiant, 1879.

William Conrad Röntgen discovery of the X-Ray, April 1, 1895.

Clyde Snook, Edwin W. Kelly and G. Herbert White, three Americans, developed high tension transformer for X-ray tubes, 1907.

Dentistry:

Robert Arthur, D. D. S., 1854, demonstrated adhesive properties of gold for dental fillings.

G. V. Black, D. D. S., 1871, brought out first dental engine.

W. D. Miller, D. D. S., 1880, established the bacteriological origin of dental caries.

G. V. Black, D. D. S., 1869, demonstrated physical properties of gold as applied to dental fillings.

Systematic Nursing:

First gained a foothold in this country in the early sixties of the nineteenth century.

Medical Education:

Medical schools requiring a three years' course did not exist in the United States in 1875.

In 1903 a four years' course was compulsory in 144 medical schools.

Women are admitted to Medical Schools and State examinations in America, England, Germany, France, Switzerland, Spain, Sweden and Russia.

FOOD VALUE OF PEANUTS

Good Health Journal says: To sum up the use of the peanut and peanut products as food may be highly recommended for the following reasons:

(1) The oil is most valuable as a table oil, equal to other oils in digestibility and food value; (2) the shelled nuts are a splendid food, cheap and nutritious; (3) The salted nuts are equally nutritious; (4) peanut butter is highly useful in many ways, besides being rich in fat and protein. It is a butter substitute and likewise a substitute for meat; (5) the whole shelled nuts as well as part of nuts are well adapted for use in candies, cakes, cookies, wafers, etc.; (6) the flour from the peanut itself or from the oil cake is a good part-substitute for wheat flour for bread making.

OLNEY HAS ONE TOO

But They Do Not Apparently Call Him By the Same Name

Mount Carmel is also on the map with Olney. A title like Doc. Fritchle's has been wished on Doc. Schneck; only the *Mount Carmel Republican-Register* calls it "collaborating epidermologist," which we believe we admire even much more than the other.—*Olney Daily Mail.*

ILLINOIS MEDICAL JOURNAL

Published monthly by The Illinois State Medical Society under the direction of the Publication Committee of the Council.

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Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 927 Lawrence Avenue, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

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State society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

JUNE, 1920

Editorial

THE ROCKFORD MEETING

The seventieth annual meeting of the Illinois State Medical Society adjourned May 20 after one of the most interesting sessions it has held in many years.

The attendance was well up to standard; the large attendance was specially gratifying because of the fact that the meeting was held at the northwest corner of the state in a city not readily accessible to railroad transportation from other portions of the state.

From the scientific standpoint the papers read at this meeting were considerably above the average of papers read at previous meetings. A serious objection to the arrangements of the meeting was the short time allowed (two days) to dispose of the very long program. We feel confident that some satisfactory plan to take care of all who wish to read papers at the next convention will be arranged for the 1921 meeting.

The House of Delegates disposed of a great amount of important business in a methodical and rapid manner. The reports of the numerous elective and appointive committees were perhaps the best that were ever presented to the House of Delegates.

The House of Delegates adopted several resolutions of far reaching constructive character. One of the most conspicuous of these was the disapproval by the Society of Physicians loaning their names so freely to unAmerican schemes (as has been the case in the past) before the physician has given thorough consideration to the possible deleterious effects the propaganda put out by individuals sponsoring these visionary schemes might have upon people and the medical profession.

In another resolution the Society went on record as being in favor of State rights and expressed its disapproval of the attempt by the federal government to usurp the functions and duties that legitimately belong to the several States. The House also went on record in instructing its delegates to the American Medical Association to oppose State Medicine, Compulsory Health Insurance, Nationalization of the City, County and State Health Agencies and allied dangerous Bolsheviki schemes in the next House of Delegates of the American Medical Association.

It also created a committee on the standardization of hospitals. Hereafter the Illinois State Medical Society is to do the standardization of the hospitals of the State. This is as it should be. The Director of Registration and Education, Mr. Shepardson, approved of the appointment of such a committee and agreed to cooperate with the Society in the standardization of hospitals.

Dr. Charles E. Humiston was made president-elect of the Society. There are only a few men in our Society who have contributed as much to the development and guidance of the policies and general activities of our Society as has our new President-elect. He will fill the position with credit.

THE NEW ORLEANS MEETING OF THE A. M. A.

The American Medical Association held its seventy-fifth annual meeting at New Orleans April 26 to 30. The city is a delightful place for a Spring session of the A. M. A. One of the serious handicaps to New Orleans as a convention city is the lack of adequate hotel accommodations. Many of the visitors were uncomfortably housed in private homes and boarding houses some distance from the downtown district. Boston is to be the next place of meeting of the convention. Let us hope the Hub city will have greater facilities for taking care of the great crowd that usually attends the A. M. A. meeting. In spite of the handicap of hotel accommodations New Orleans gave a warm reception to the medical men and women who attended the meeting. The town is very interesting, the old and new parts of New Orleans demonstrate by contrast the old and new ideas and ideals of municipal progress. The old negro quarter with its open sewers, the French and Spanish quarters with narrow streets and buildings 200 years old, continuously occupied during this long period of time, are very interesting to the sightseer. At the time of the session the Mississippi river was at nearly record height and afforded an interesting trip by boat, where one could view at the best advantage the 35 miles of docks and see the ships from various countries of the world.

The clinics, while not up to the standard given at some of the northern and eastern conventions, nevertheless were quite instructive. There was an excellent scientific exhibit; everything pertaining to medical and surgical science was in evidence.

The House of Delegates did a great amount of good work. One of the most conspicuous and of far-reaching importance to the medical profession was the unanimous disapproval of Compulsory Health Insurance in spite of the machinations of Dr. Alexander Lambert, the retiring president of the Society, whose pernicious influence was exerted up to the moment the vote was taken on this measure.

A great deal of vicious legislation was headed off and a liberal amount of soothing syrup was poured on the medico-economic hysteria and Ouija Board and dream book schemes so prevalent today among a group of near-doctors who roam through the medical world seeking whom they may devour.

The House of Delegates elected Dr. Hubert Work of Pueblo, Colo., for its next president. We understand that Dr. Work is the first neuropsychiatrist ever elected president of the American Medical Association. Dr. Work is a good judge of men and affairs and we have every reason to believe he will steer clear of the mercenary schemes of his predecessor. A rule that should be inaugurated at once is to place a limit on the inaugural address of the incoming president. It is very discouraging to have to listen to an uninteresting man rehashing elementary stone age stuff for a period of two hours and offer as an excuse for giving a long nerve-exhausting address that he gets a chance like this but once in a lifetime.

THE ILLINOIS STATE MEDICAL SOCIETY TO STANDARDIZE HOSPITALS

The Illinois State Medical Society has taken vigorous hold of the problem of standardization. The director of registration and education, Mr. F. W. Shepardson, has asked the physicians of Illinois for advice and co-operation. This is as it should be. Any attempt by any outside organization to gain control of the hospitals where physicians must work is a bit of insolence which the profession as a whole cannot tolerate.

The hospitals must be encouraged in their proper work of caring for the sick and protected from becoming the feeding or recruiting grounds for any particular group of specialists. The machinery of the State Society is admirably adapted to handle the hospital question. Illinois has set an example which the other states should lose no time in following.

RETROSPECT OF MEDICAL PRACTICE IN ILLINOIS

Dr. O. B. Will, of Peoria, consented to give us a history of medical practice in Illinois during the last seventy years. We looked forward for a very interesting paper containing historical data that our membership would enjoy reading. As we were about to go to press we received a letter announcing the sickness of Dr. Will and his inability to complete the paper in time for the June issue. We regret being unable to publish Dr. Will's reminiscences in this June number of the JOURNAL along with the other data showing the progress of medicine during the last seventy years. Dr. Will's paper will be published in a later issue.

THE SERIOUS SCARCITY OF PRINT PAPER

It is not only the high cost of paper but as well the scarcity of it that is giving us troubled dreams at night and high blood pressure during the day. The May issue was printed on a paper of an inferior grade and considerably off color to our regular stock. Nobody regretted this incident more than the editor. It was the only grade of paper purchasable at the time. We had to accept this stock; otherwise the May issue of the JOURNAL would have failed to come out. Because of the paper embargo the supply ordered four months ago has not arrived at the date of publishing the June JOURNAL. This purchase should have reached us April 1. A great many journals have had to discontinue publication because of the embargo, railroad strikes and the shortage of paper. We hope to be able to continue our publication but we do ask our readers to be as charitable as possible towards us until conditions assume a normal state.

THE ENTERING WEDGE.

ABOLITION OF MEDICINE AS A PRIVATE ENTERPRISE.

G. FRANK LYDSTON, M. D.
CHICAGO.

The Bolshevik is at the Medical door—rapping faintly but still rapping. I previously have called attention to the obvious fact that the medical profession is the weakest link in the "bourgeois" chain. Naturally, it is here that the red has begun "hammering." The first blow aimed was compulsory health insurance. Marvel 'tis that a single doctor in this broad land of ours should favor this wolf in sheep's clothing—but there are plenty who do. Still greater marvel that so many of these microcephali should have been permitted to enter medicine. Cheap colleges? Alas! no; the crowd of "Class A," self-labelled "highbrows" that stands behind the "We Are Its" who are trying to establish a medical bureaucracy in Washington, would make an equal number of morons look like Solomons. The bill recently introduced in Congress proposing the abolition of medicine as a private enterprise, had all the earmarks of bolshevism but, all the same, I will wager a large red apple that behind it stood the "We Are Its."

Blow number two was State Hospitals and the rest of the ill-begotten brood of schemes to take medicine out of the hands of the profession and hand it over to the bolshevists—plain "reds" and medical high brows who, having climbed to the top via the favor of their professional clientele, are ready to kick the ladder out from under themselves at any time if sufficiently tempting honors or emoluments are offered. *Having "got theirs," to hell with the little fellows.*

Apropos of the proposed State Hospitals: A certain member of the Illinois State Legislature was asked if it wouldn't be rather expensive to secure the services of high grade medical men for the proposed institution. "Hell, no," he replied, contemptuously, *"We can get all them fellers we want, for nothin'."*

And the politician was right. The cheapest thing on earth—and with the least *esprit de corps*—is the eminent physician. His ethics begins and ends with keeping the little medical pigs out of the clover patch while the big hogs wax fat.

Speaking of the pernicious compulsory health insurance scheme, a splendid article by Dr. M. L. Harris, appears in the J. A. M. A., April 10, 1920. Every doctor should read this—and then write Dr. Harris and ask how he stands on the proposed *gobbling up of American Medicine by the Government,* through the medium of a Medical Cabinet officer, large appropriations for medical "advancement," etc.

By way of wasting some more perfectly good ink and nice white paper I will venture a prediction viz.: Within a very few years practitioners of medicine will have resolved themselves into: 1. Fellows who are content to pass a civil service examination to acquire a job with the usual pitiful salary paid to men in political jobs. (Everybody knows the sort of service the public would get from men who haven't the self respect of a bricklayer, and knows also, how much they contribute to medical science.) 2. A few eminent consultants who will monopolize the rare bird who is willing to pay well. 3. "Quackopaths" in infinite variety. 4. Christian Scientists and faith healers. 5. Voodoo doctors. 6. Patent medicine men.

The good old family doctor and the independent specialist will be as extinct as the dodo, the great auk and the archeopteryx.

Meanwhile let the profession sleep on. The low brow "red" and the high brow bolshevik will attend to everything for us. The "red" will work unmolested because the profession doesn't take him seriously, the "high brow," because the average doctor doesn't know that some lofty human fronts are like certain houses with imposing front elevations. One tumbles down the back steps immediately he enters the front door.

Remedy? Sure, but the rank and file haven't perspicacity sufficient to grasp it, nor backbone enough to put it in practice. *Let the medical rank and file list the "We Are Its" who favor schemes inimical to the best interests of the profession at large and serve notice on them that "referred work" has stopped—then watch the eminent consultants and operators climb trees.*

25 E. Washington Street.

IT IS STRANGE, DR. LAMBERT

It is a little strange that Dr. Alexander Lambert, the president of the A. M. A., should be mixed up in a few things that do not meet with the approval of right-thinking medical men. It is all right for Dr. Lambert to champion compulsory health insurance and fight his local medical society on that question if he so chooses, but it does not look particularly well for him, reported as being interested in the Towns-Lambert Drug Cure and Sanitarium of Central Park West, New York City, to be championing the anti-drug bill presented for passage before the New York state legislature and aimed at doctors and in the interest of drug addict institutions. The bill, if passed, would prohibit physicians from prescribing morphin for their patients, and dispensing drugs, and to commit drug addicts to institutions.—*Indiana Medical Journal*, May, 1920.

NOTE: The doctors of Indiana may derive consolation from the fact that it was the very activities along the lines complained of in the above that so thoroughly discredited Dr. Lambert at the A. M. A. meeting at New Orleans. It is an old saying "that if you give a calf sufficient rope it will hang itself." In Dr. Lambert's attempt to destroy the profession he was unsuccessful; however, he did succeed in discrediting himself in the estimation of the rank and file of his fellows.

"They hung Haman on the scaffold he had prepared for Mordecai," and the same poetic justice was meted out to Dr. Lambert at New Orleans when he was hung on one of the many scaffolds of destruction he so energetically prepared for the execution of the medical profession of the United States.

AMERICAN MEDICAL ASSOCIATION BY UNANIMOUS RESOLUTION CONDEMNS HEALTH INSURANCE

At the New Orleans meeting the following resolution was adopted:

Resolved that the American Medical Association declares its opposition to the institution of any plan embodying the system of Compulsory Contributary Insurance against illness, or any other plan of Compulsory Insurance which provides for medical service to be rendered contributors, or their dependents provided, controlled, or regulated by any State, or the Federal Government.

The resolution was adopted without a dissenting vote and in spite of the machinations of Dr. Alexander Lambert (retiring president of the A. M. A.), whose pernicious influence in favor of Health Insurance was exerted up to the very moment the vote was taken.

The history of the progress of the resolution through the House of Delegates is of interest to the profession. When it was introduced Dr. Lambert was successful in having it referred to the reference committee on Hygiene and Public Health of which Dr. Schereschewsky (United States Public Health Service), an avowed advocate of Health Insurance, was chairman.

Immediately after adjournment of the first session of the House of Delegates Dr. Lambert appeared (uninvited) at the preliminary meeting of

the Schereschewsky committee and at once proceeded to tell the members what kind of a report they must bring in. At intervals during Dr. Lambert's talk the chairman would interrupt with the statement, "Yes, that's the report we will bring in." It was apparent at the outset that the intention was not to let the other members have anything to say in formulating the report. After Lambert's talk the committee adjourned to meet later in order to discuss the resolution. Inasmuch as another meeting of the committee had not been called up to the time of convening the House of Delegates for the second time, a member asked the chairman when they would be called together to consider the resolution, to which question the chairman replied, "I am ready to report now." The other members were not to be allowed to discuss, or for that matter, to see the report which they were supposed to sponsor. Strong arm methods that have characterized the propaganda for Health Insurance from the outset.

Three members of the committee insisted on an official meeting and finally the chairman reluctantly called one. When convened, Schereschewsky steadfastly refused to grant a hearing to the sponsors of the resolution. Being outvoted in this particular, the committee decided to invite representatives to appear from the states having delegates instructed to vote and work against health insurance. After much arguing the committee stood four to one for the original resolution. The chairman at last consented to a unanimous recommendation, but reserved the right to bring in a minority report at the last moment. This he failed to do; perhaps he had learned the temper of the House of Delegates in the meantime.

Before final action was taken on the resolution, Dr. Lambert (not a member of the House, and without even asking the courtesy of the floor), proceeded to deliver a tirade against the resolution, hoping by this means to stampede the delegates and prevent its adoption. The presiding officer ordered him to sit down. The vote on the resolution was taken with the result above mentioned.

Dr. Lambert went to New Orleans carrying a endless chain of pet schemes, and throughout the first half of the session his actions were those of an autocrat. His final complete discreditment shows that autocracies have gone out of fashion in the American Medical Association almost as much as in politics.

SEVENTY YEARS OLD TODAY

As we go to press for this issue the Illinois State Medical Society is seventy years of age. The organization was founded June 4, 1850. The founders and the original members of the Society have long since crossed the divide. They live with us in our daily practice either in tradition or memory.

Man is not immortal but in a limited sense a society or organization may be. To the individual the years bring wisdom but lessen the ability to profit by it. A medical organization is under no such handicap.

On this, its seventieth birthday anniversary, the Illinois State Medical Society stands on a mountain of accumulated experience and yet greets its membership with a sprightly sense of being younger than ever.

Seventy years! This is an age which most societies find venerable. In the West the next oldest contemporary is the Chicago Medical Society founded in the same year and three years after the debut of the American Medical Association.

Think back and see if you can reconstruct the life of that time. The death rate for Chicago per one thousand of population in 1849 was 73.8; in 1850 or one year later it was 48.96 and for 1919 it was less than 12; for the State of Illinois the death rate for 1850 was correspondingly high; and for 1919 has been similarly reduced. The population of Chicago in 1850 was 29,693; of the State of Illinois 851,470; now there are nearly 3,000,000 people in Chicago and 6,500,000 in Illinois.

The Illinois State Medical Society was organized seven years after the establishment of Rush Medical College, the first educational institution in Illinois. Only seven years before Dr. Oliver Wendell Holmes had announced the infectiousness of puerperal fever; only four years before the first public use of ether as an anesthetic had been given out, and only three years before the first use was made of chloroform for the same purpose.

Detailed record of the progress of medicine during the last seventy years is epitomized in a

special article in this number. We ask our members to read it carefully. In this editorial we refer to a comparatively few items that are of more than passing interest to Illinoisans:

1850 Devaine discovered the organism of Anthrax.
Illinois Medical Society founded.

1851 Opthalmoscope invented by Helmholtz.

1854 Dr. N. S. Davis began regular publication of reports on health of Chicago.
Dr. Daniel Brainard advocated infiltration of solutions of iodine in treatment of poisoned wounds.

1855 Discovery of Trichinæ.
First use of quarantine placards in Chicago.
E. S. Cheesbrough, engineer, advised flushing Chicago river with water from Lake Michigan for purification purposes.

1858 Czermak invented the Laryngoscope.

1859 Chicago Medical College started—the first medical school in America to require graded course of instruction.
Dr. John H. Rauch, in a paper before the Chicago Historical Society, called attention to the danger of intramural interments. As a result the city cemetery on the north side was dedicated as a public park by action of the city council. This was the beginning of Lincoln Park.

1861 Semmelweiss, in Vienna, preached the doctrine of cleanliness as preventive of puerperal fever.

1867 Lister, acknowledged his debt to Pasteur, advocated antisepsis in surgery.
Dr. John H. Rauch appointed Sanitary Superintendent of Chicago. First tunnel, two miles long, completed for supply of lake water.

1869 First inspection of milk in Chicago.

1870 First milk ordinance in Chicago.
Simon demonstrated the possibility of removing a kidney.

1871 American Public Health Association formed, with John H. Rauch of Chicago as treasurer.

1876 Establishment of Department of Health, Chicago.

1877 Illinois State Board of Health established. License required for practice of medicine in the state. This was the third attempt to regulate the practice of medicine in the State. (Act of 1819, repealed in 1821, established a medical society with authority to license practitioners and to fine members absent from meetings. Act of 1825 was repealed before effective.) At meeting of American Public Health Association in Chicago N. S. Davis read paper on Means of Reducing Infant Mortality. Dr. Henry M. Lyman protested against the placarding of scarlet fever, deploring the waste of cards and tacks, and revolting against the "yellow card nuisance."

1878 Eight per cent of hogs in Chicago slaughterhouses found to be infected with trichinæ.
Birth registration in Chicago thought to be approximately complete.

1879 Pasteur announces the infective agent in puerperal fever.
Neisser discovers the Gonococcus.
Professor Lester Curtis, at Chicago Medical College, made the first systematic use of the microscope in medical education in America.

1880 Discovery of Eberth's bacillus as cause of typhoid fever.
Discovery of the parathyroid glands by Sandstrom.

1882 May 5, Pasteur demonstrated the protective power against Anthrax, using cultures attenuated by growth in higher temperatures.
Pasteur demonstrated protective power of cultures attenuated by age against chicken cholera.
March 24, Koch announced the discovery of the Bacillus tuberculosis.

1883 Germs of diphtheria and glanders discovered.
First series of lectures in Illinois given by Prof. Henry Gradle on the germ theory of disease.

1884 Bauer, in St. Louis, operated for epilepsy, removing a portion of the skull.
Metchnikoff discovers the protective power of phagocytes.
Bacillus of tetanus found.

1885 Dr. F. W. Riley published article in the *Daily News* calling attention to flies as carriers of disease.

First intubation in Illinois for laryngeal diphtheria performed by Dr. Frank E. Waxham.

Demonstration by Pasteur of curative action of injections of spinal cord of rabid rabbits attenuated by drying in treatment of hydrophobia. Use of cocaine as local anesthetic.

1888 McEwen of Glasgow performed laminectomy for spinal paralysis.

1889 Gueniot suggested the section of skull for idiocy. Operation performed by Lannelongue in Paris, Keen of Philadelphia, and Wyeth of New York.

Sanitary District of Chicago established.

1890 Discovery of the antitoxin of diphtheria by Behring in Germany and Kitasato in Japan, with its curative and protective powers.

Antitoxin of tetanus discovered.

1891 U. S. meat inspection law passed.

Lumbar punctures used in diagnosis of cerebrospinal meningitis.

1894 Discovery of the photographic power of the X-ray.

1895 Recognition of the doctrine of "internal secretions," first announced by Sajous in 1873 and rediculed.

First diphtheria antitoxin issued by the Chicago Health Department, Oct. 5.

1897 Recognition of action of precipitin and agglutinin in sero-analysis.

Haffkine's serum used successfully against the bubonic plague in India.

Rehn first successfully sewed a wound of the heart.

1898 Ronald Ross demonstrates Anopheline Mosquitoes as essential agents for the spread of malaria. (This discovery depended upon, and added confirmation of, the discovery of Manson in 1876 that filiriasis is spread by Culex mosquitoes and the discovery of Leveran in 1880 of the plasmodia of malaria. It also revolutionized public health work.)

Invasion of hookworm through skin demonstrated.

1900 Discovery that the presence of Stegomia mosquitoes is essential for the spread of yellow fever.

Rats were found to be disseminators of bubonic plague with the aid of fleas.

Chicago Drainage Canal opened.

Alderman William Hale Thompson, by resolution in city council, secured the first public playground for Chicago.

1902 Demonstration of agency of the tsetse fly in spread of the African sleeping sickness—trypanosomiasis.

1903 Illinois Medical Society incorporated "to promote science and art of medicine."

1903-4 Wright's recognition of "opsonins."

Atoxyl found specific for African trypanosomiasis, when given in efficient doses. Trypanosomes rendered immune by small doses.

Recognition that beriberi was result of use of rice which had been deprived of its outer coating, containing vitamines; first affirmed in 1880 by Eikman, and independently by Bradden in 1893.

Country dairy inspection inaugurated by Chicago.

1905 Discovery by Schaudinn that Treponema pallidum is causative organism in syphilis.

Discovery of anaphylaxis, or recognition thereof.

1906 First systematic bacterial inspection of Chicago milk from dairy farms.

1908 Adoption of dairy cards in Chicago Department.

Ordinance for pasteurization of milk not from tuberculin tested cows.

10,000 cows tuberculin tested.

City discontinues registration of births and deaths.

Lawrence avenue conduit completed.

1909 Discovery of the louse as carrier of typhus fever.

State of Illinois assumes distribution of diphtheria antitoxin.

Under the Glackin law Chicago votes to establish a tuberculosis sanitarium.

1912 Chlorination of Chicago water supply begun.

Publication of studies of Creel and Cannon on general physiologic action of adrenin.

1917 State Board of Health of Illinois abolished. State Department of Registration and Education created and given jurisdiction over practice of medicine and allied sciences.

Illinois admitted to Federal Registration "Area for Deaths."

In 1850, at the time our society was established, the old gig and gray Dobbin, saddle bags, sulphur and molasses and the great horn spoon were the doctor's vade mecum. Contrast this condition with the present day method of transportation and treatment of the sick. The automobile and the aeroplane have relegated old Dobbin to the rear. Newer and more successful medication and surgery have supplanted the cruder methods.

Men and causative forces have achieved closer acquaintance in the seventy years that have elapsed since the inception of the Illinois State Medical Society. Seven centuries of progress have been attained through those seven decades. With a similarly continuous pace, perhaps the light of the millenium may be unfolded to the world before the coming seventy years have ended.

Civilization has been maintaining an excellent balance along lines economic, physiographic, artistic, philosophic, scientific and humanitarian. Without egotism the medical profession may account itself a vital factor in the motivation of these seven growing decades. Doctors of the world have played a conspicuous part in unfolding the wonders of scientific progress that have been revealed and have helped to keep them unlocked for daily use.

Owing to self-sacrificing labors of medical men during the last seventy years, epidemic and endemic affections, such as malaria, typhoid fever, smallpox, yellow fever, typhus fever, cholera and hook worm diseases have been banished where civilization extends. Through the achievement of bacteriologists and clinicians diphtheria and syphilis are preventable and curable, and meningitis and many infections are soon to cease being the dread of the community. By preventing communicable diseases and by reducing the high mortality that prevailed seventy years ago, millions of people are alive today who otherwise would have gone to untimely graves.

Passing the subject of medicine, many events of vital interest to mankind have occurred since this Society was founded. We ask you to think back and to picture in your mind the domestic facilities in use in 1850. Here is one little item that will assist you: When the Society was founded the sewing machine had just been brought out. Visualize a nation of homes without sewing machines and you will have a dim idea of the changes our organization has seen.

The sewing machine is only one of the utilities that you will find lacking in the industries if you think back to 1850. Telephones, automobiles, aeroplanes, electric cars, will be left behind at the very start of the backward journey. Telegraphs had just been installed; the first line ran between Annapolis and Washington. Cables, electric subways, elevated railways, Pullman sleepers, national railway system, ready to wear clothing, the iniquitous delicatessen, modern plumbing from kitchen sinks to Oscar Hammerstein's bathtub drain pipe, the submarine, smokeless gun powder, electric light, wireless telegraphy, great telescopes that have made astronomy's readings a fireside companion in thousands of homes and educational institutions, typewriters, cotton gins, motorcycles, passenger elevators, moving pictures, gas ranges and a million details and conveniences of modern building and construction have been brought forth during the last seventy years.

Farm labor is revolutionized by the invention of machinery to perform heavy work better than human hands or brute strength. The house of McCormick, headed by the late Cyrus McCormick, who invented the reaper and threshing machine, must be credited with this liberation.

When our Society was established anthracite coal was still an experiment as a fuel, and whale oil was to be reckoned with as an illuminant.

Since 1850 the United States has nearly doubled in age and doubly doubled in point of area, trade, wealth and population. From a struggling adolescent it has become a mature woman and a big sister to the world at large.

In 1850 railroad mileage in the United States was about 6,000 miles for the twenty-six States then in the Union. Today it approximates 300,000 miles and traverses forty-eight States. When the Society was begun the estimated area of those twenty-six States was 940,000 square miles and the population 20,000,000; in 1919

the State area was rated at 3,000,000 square miles and the population at more than 100,000,000. In 1850 the national wealth of the country was $6,000,000,000; in 1919 it was placed at $250,000,000,000.

The annual production of wealth in 1850 was $1,000,000,000; in 1919 it was $50,000,000,000. Foreign trade in 1850 was $250,000,000; in 1919 it was $9,400,000,000. In 1850 the center of population of the United States was 23 miles southeast of Parkersburg, W. Va. In 1910 it was at Bloomington, Ind.; perhaps in 1920 it will be shown to be located about Chicago.

A host of happenings which we now look upon as distant history had not yet occurred when the Society first made its appearance. Zachary Taylor was President of the United States. He died July 9, 1850. Abraham Lincoln was practicing law and vowing that if he ever got the chance to hit slavery he would hit hard. But the Dred Scott decision, which was to prove the truth of Lincoln's maxim that the nation could not exist half slave and half free, was nearly a decade in the future, and it is not likely that even in his wildest dreams the ex-rail splitter fancied himself in the White House.

When the Society began its career Louis Phillipe was on the throne of France; Germany was a welter of quarreling principalities, of which already Prussia seemed the strongest. Italy was a mere "geographical expression," divided among fourteen different states and provinces, and two of the fairest were under the ever-cursed dominion of the Hapsburgs. The revolution of 1848 had not yet dawned. The Irish famine lay below the horizon, the Turk ruled Roumania, and Japan was yet the Hermit Kingdom, on whose sacred shores no foreigner was allowed. English ships sailed to India by way of the Cape of Good Hope. Australia was known only as a convict's settlement.

Other red letter years during the existence of the Illinois State Medical Society include the French Revolution; gold had just been discovered in California; Australia had this good fortune in 1851; Louis Napoleon was made emperor of France in 1852; Crimean war began in 1853; Commodore Perry's opening of Japan, 1854; end of Crimean war, 1855; the great mutiny in India, 1857; the Dred Scott decision, 1857, and the rumbling of the civil war that was to come; first Atlantic cable message, August 4, 1857; secession of South Carolina, December 20, 1860; emancipation of Russian serfs, 1861, and in the United States civil war, 1861; Lincoln's emancipation proclamation and the ending of slavery, 1863; surrender of confederate army, April 9, 1865; assassination of President Lincoln, April 14, 1865; Atlantic cable laid, 1866; Dominion of Canada established, 1867; Franco-German war, 1870; France proclaimed a republic, 1873, three years after the capitulation at Sedan; Chicago burned, 1871; Mt. Vesuvius erupted, 1872; first elevated train run in New York in 1878; Bartholdi Statue of Liberty presented by France to the United States, July 4, 1884; Brazil became a republic, 1889; Cinema invented, 1894; Cuban revolution, 1895; Spanish American War, 1898; New York subway opened, 1904; North Pole discovered, April 6, 1910; Republic of Portugal established same year; United States postal savings bank system founded, 1911; South Pole discovered, December 14, 1911; China proclaimed a republic, 1911; the Peace Palace at the Hague dedicated, 1913; starting of the world's war, 1914; Panama canal opened, August 15, 1914; China restored as a monarchy, 1915; Russia rid herself of the czar, 1917; United States entered the world's war, 1917; termination of the world's war, November 10, 1918.

Perhaps the greatest industrial and social advances in the three score years and ten just ended have been recognition of the value of women and children to the State, and the practical granting of franchise to women over 21 years of age. Will the changes borne by the next seventy years be as strange? Since history is merely a repetition of emotions and events, we have every reason to believe that progress will surprise itself during the next seven decades. Seventy years from now we will stand, by comparison, where 1850 stands today.

NATIONAL MEDICINE BY THE BOOZE ROUTE

Doctor, have you received from the Internal Revenue Department the suggestion that you endorse a provision for federally conducted stations where a physician in attendance (and salaried) may dispense booze of approved quality or fill your prescriptions for aforesaid good qual-

ity booze? Incidently inserting the wedge of "National Medicine?" When it comes your way study it carefully and puncture it. County society officers, be on the alert for this delusion and snare, and warn your membership against its dangers.

CONGRESSIONAL INVESTIGATION OF THE NARCOTIC SITUATION

The resolution passed at the Rockford meeting asking for an investigation of the narcotic situation is very timely. Let us hope it may clarify the atmosphere which has become befogged by the conflict of the Harrison Law and the various State laws and may enable the country to get rid of the tendency to "enter and search" for anything from dandelions and raisins and yeast to heroin and morphin.

GOVERNOR LOWDEN APPROVES OF STATE MEDICAL SOCIETY RESOLUTION

The following State rights resolution passed at the Rockford meeting was forwarded to Governor Lowden:

WHEREAS, There is a growing tendency in our National Congress to invade the authority of the States by the introduction of bills authorizing various departments of the Federal Government to exercise public health functions and duties properly belonging to the states; and

WHEREAS, There is an equally dangerous tendency in our own State towards the assumption by voluntary and irresponsible extra governmental agencies of powers and functions properly belonging to the locally constituted health authorities; therefore be it

Resolved, That the Illinois State Medical Society disapproves of any action whereby the Federal government attempts to exercise authority over health matters in any State except insofar as questions of National or Interstate importances are involved and that we urge that the regulations of all State health matters be under the direction of the legally constituted health authorities of the state as the representative of its citizens in health conservation operation, and be it further

Resolved, That we condemn the principle of Federal State aid as pernicious and dangerous; that it is an incroachment on the functions of the State and an invasion of State authority tending to the demoralization of State Public Health work, rather than its development.

The Governor commented on the resolution as follows:

Springfield, Illinois,
May 25, 1920.

To the Secretary,
Illinois State Medical Society:

I beg to acknowledge the receipt of your letter of May 21st with resolution enclosed. I am glad your Society has taken this action, as I have been for a long time in full sympathy with the views expressed in the resolution. If the present tendencies towards centralization at Washington go on, all vitality will go from the several communities and States of the country in the management of their own affairs.

I congratulate the Society on the good work it is doing.

Very sincerely yours,
Frank O. Lowden.

NOTE: We have commented editorially several times on the dangers of centralizing everything in Washington. If this tendency is not stopped we will be the most governed people in the world. We are proud of the fact that Illinois' presidential candidate is the first aspirant for this great honor to go on record against the great danger of centralization of power and the establishment of a bureaucratic form of government.

A THREAT FOR THE MEDICAL PROFESSION.

IF YOU DEFEAT COMPULSORY HEALTH INSURANCE YOU WILL HAVE TO TAKE STATE MEDICINE.

Brooklyn, May 18, 1920.

To the Editor: I am convinced that this Compulsory Health Insurance question will not down until the medical men of the national are awakened to the viciousness of it and its associated legislation.

I am sending you some of the literature which was effective in our New York State campaign, which I think will interest you.

I want you to know that we made the atmosphere so hot in this state for the A. A. L. L. that its propagandists lost their temper and fell to

making threats; one of them was that if we defeated Compulsory Health Insurance we would have to take "State Medicine" and we had just such a bill in Albany this year which empowered a Board of Lay Men to take over the control of things medical through "Community Health Centres" which would have the practical effect of making our Boards of Health and other agencies of healing subordinate to those boards and disrupt the hospital organizations by making it possible for any person to have his own doctor attend him in any hospital he might choose and no distinction was made between medical and surgical cases. I sympathize, of course, with the physician who is solicitous of his patient and jealous of any one else treating those whom he has learned to love, however efficient that other doctor might be, but I can readily see that the man who has made neither the sacrifice of time nor the contribution of effort to acquire hospital training and experience, if permitted to carry his own methods into a well organized hospital, would soon demoralize the staff and injure the reputation of the institution itself . . . but that State Medicine Bill sought by fiat legislation to do what you and I know is impracticable.

Then we were threatened that if we refused to do work under a Compulsory Health Insurance Bill, if passed, our licenses to practice Medicine would be expunged under the police power of the State; the Police Power is the braodest power in law but at the time of the threat there was no Law on the Statute Books of N. Y. State which could have made that threat good; a Bill was introduced, however, purporting to be a constructive modification of the existing Medical Practice act but it contained an entering wedge for Birth Control and by providing an apparently innocent change of a $25 fee to $50 in the section under which a graduate prior to 1895 (25 years ago) could have his license endorsed *without examination* with the same force and effect as if *he had passed an examination* revived a *dead law* and made it applicable to those graduating prior to 1895 (of whom there are probably not five whose registration was never perfected or contained a technical defect) but left the remainder of the provisions covering eligibility to examination for license usable, at the discretion of the licensing power, as the alternative remedy for those to whom *re-registration* (under interpolated sections) might be refused under the exercise of the discretion of the licensing board. Since a license is a privilege and not a right I can see no way of legally or equitably compelling the exercise of that discretion in favor of one who, for instance, had *refused to make the* (Compulsory Health Insurance) *law operative.*

The introducer of that law pleaded for its passage because the State Medical Society had indorsed it, but he and the assembly were informed that the rank and file *did not want it* and it and the State Medicine Bill were killed aborning.

It is significant that the State Medical Society of New Jersey *did not favor or endorse* such a medical practice act but an identical act was introduced in the legislature *just the same.*

The proponents of the hysterical "uplift" legislation including Compulsory Health Insurance who deceived (or acted in collusion with) some of the leaders of the State Society in N. Y. were behind the bill in New Jersey and will be behind it in Illinois and elsewhere.

A good way to punish recalcitrant Medical Citizens who oppose the pet schemes of the Sage and other Foundations to card-index humanity and control them in their most private and sacred functions would be to make the profession of medicine ridiculous and contemptible: Let me tell you a story: In a Southern city the doctors abused the privilege of receiving calls from the stage of the theatre and secured some cheap advertising until it became a nuisance; an actor who knew human nature promised to end it and at the end of the second act the manager came before the curtain and said, "Is Dr. ——— in the house?" whereupon there arose one of the lowest of the "poor white trash," a veterinarian from experience and a doctor from choice of title, and ambled out of the theatre. The practice stopped.

In New York state a bill was introduced legalizing the activity of those who practice Mechanotherapy, massotherapy, electrotherapy, hydrotherapy, neuropathy, naprapathy, diatetics, vibrotherapy, zonetherapy, suggestive therapeutics, magnetic healing, *or any other form of drugless therapy which hereafter becomes known or in use!* We killed it in committee.

The Chiropractic Bill got by the legislature but Gov. Smith promptly vetoed it.

A Narcotic regulation Bill was introduced

which would have encouraged the growth, over night, of a lot of Narcotic Addict Sanitaria (like the Lambert and Towne . . . or Towne and Lambert); that died too. *Why?*

In New York State we have our doctors, dentists and druggists, attached to scientific societies and unattached, organized into professional guilds and associations and centralized through a clearing house committee which has been developed since the first of last August when I started the Professional Guild of Kings Co. and made a pest of myself until I had the professions aroused and working; then I began to spread it through the state, by correspondence, and on April 7, at the hearing on the Davenport Bill at Albany I met some of my correspondents for the first time, *but they came charged with the authority of their own and adjacent counties* and we talked a language which the legislators understood, perfectly; the language of *votes,* punctuated with defeats. . . I am a Democrat and I helped retire ten Democratic candidates for assembly out of the 23 districts in this county on a Compulsory Health Insurance Issue. You remember the doggerel about "someone told the sexton and the sexton tolled the bell"? I told my assembly district chapters about the bill and they told their patients and friends and neighbors and the neighbors "tolled the bell" for the candidates who were disposed, through ignorance or party regularity, to play fast and loose with the public health and throughout that entire campaign not a single Assembly District Chapter (23) of the Guild either endorsed or opposed a candidate, as such, but my goodness! how the "underground telegraph" changed the vote. We met, in every Assembly District Chapter, alternately in the Republican and Democratic headquarters and did not pay a cent for the use of the building; the leaders were very anxious for our good will because, you see, we medical men had awakened to our rights as citizens and our duty to our patients and the state to safeguard the *privilege* of the practice of medicine against the assaults of the forces of unrest which sought to Prussianize it at the behest of an American(?) Association for Labor Legislation which is part of the Labor Internationale which held its congress in Paris in 1901 and was instituted, inspired, financed and controlled by the Imperial German Government for the purpose of breaking down the social, physical and economic forces behind the lines in those countries which it was intended, later, to subjugate. The mere fact that that purpose failed has not interrupted but simply changed the form of the propaganda and it will be our business to so organize medical men as citizens *of* their state as well as residents *in* their state that the campaign in N. Y. will be a continuing one and will spread, in much the same form, throughout the nation.

One thing you must be prepared for: the A. A. L. L. is inaugurating a propaganda through the various church organizations which are honestly seeking the brotherhood of man, but the ministers, poor fellows, are as easy and gullible as the doctors and, like the doctors, they have some false leaders. There are lawyers and "members of the bar"; there are doctors and "M. D's"; there are ministers who preach the word of God and those who practice the will of their paymasters. Here in New York we see this new channel of propaganda being prostituted to the purposes of the A. A. L. L. and the other forces of unrest; you will get it in Illinois. Forewarned is forearmed; let the doctors, dentists and druggists go to church a little more frequently and they will soon recognize it and when they do let them demand that if the church is to become a quasi-political forum rather than a house of worship that the matters be discussed in debate and not "ex parte" and we will drive the false Doctrinaires, the Herr Professors, the Professional Philanthropists and the Busy-Body Social Uplifters and other forces of unrest back to the soap boxes where they belong, and the sooner we do that the sooner, as medical men, shall we have fulfilled our duty to our people and our country.

Heretofore the doctors and other agencies of healing have lived by the motto:

> "Let us live for those who love us,
> For those we think are true,
> For the Heaven that smiles above us,
>
> And the good that we can do."

Beautiful, isn't it? But we need to blend strength with beauty to be efficient and to borrow from the U. S. Marines their slogans, "If you don't know you get killed," and "Treat 'em rough." Then our friends will admire our efficiency and our enemies will respect our force.

Fraternally,

JOHN J. A. O'REILLY, M. D.
405 Union St., Brooklyn, N. Y.

THE SUBSTITUTE FOR HEALTH INSURANCE THAT IS BEING ADVOCATED. IT IS EVEN MORE DANGEROUS THAN THE ORIGINAL SCHEME

The Title of the Propaganda Is: Nationalization of the Agencies for the Health-Welfare of the People

It provides for, first, the creation of a United States Department of Health-Welfare with a political head in the cabinet, the department activities to include regulation of the professions of medicine, dentistry, nursing and pharmacy and of such other callings as are intimately related to the health-welfare of the people. The department to include the present United States Public Health Service and to create such other bureaus as may be required, among them one known as the Bureau of Standardization, Qualification and Pension.

The creation in each state of a State Health-Welfare Department with subdivisions, such as (a) Administration, Comptrol and Audit; (b) Education, Information, Publicity, Grading, Appointment and Pension; (c) Public Health, Sanitation, Engineering and Physical Properties; (d) Laboratories and Research; (e) Practice, Hygiene, Diagnosis and Therapeusis; (f) Institutions, Hospitals and Dispensaries; (g) Domiciliary and Industrial Service, and such others as the needs of the Department may require.

The State Health-Welfare Service to include doctors of medicine, doctors of dental surgery, registered nurses, licensed pharmacists and morticians, sanitary engineers, architects, chemists, physicists, statisticians, accountants and others.

The State Department of Health-Welfare upon certification by the State Department of Education of the fitness of a citizen to begin professional study directed toward securing appointment in the Health-Welfare Service of the state, to enlist each year for full time paid service as many as it is found the service annually may require. All appointees so entering the service must progress from grade to grade within very narrow time limits and until certified by the State Department of Education that such have qualifications equal to those required today for admission to the legal practice of the particular profession chosen.

The State Department of Health-Welfare with the State Board of Charities to become custodian of and to control and manage all hospitals, dispensaries and other institutions caring for the health-welfare of the people that are maintained by endowments, public funds and charitable contributions.

A flexible standard of health to be established, preferably by the United States Department of Health-Welfare above the minimum of which all individuals to be considered well.

Compulsory periodic physical examinations of every individual in the state to be established. The individual to have absolutely free choice as to the examiner who, however, must be a graded practitioner of the state.

Establishment of compulsory treatment, *without limitation other than recovery or death*, of those compulsorily examined and found to be below the minimum standard of health, and, of those taken sick. Such findings indicate that the individual's health is a menace to the health-welfare of his neighbor, the community and the state. The sick and below standard individual to have free choice of the practitioner to manage and direct his case, the only requirement to be that the attendant must have the minimum grade for such service.

A compulsory sickness insurance system to be established to provide funds from which certain sums are to be paid to the dependents of those individuals who, by reason of the establishment of compulsory treatment, are compelled to lose the normal income from the industry in which they were employed. The insurance premiums and payments to be determined along actuarial lines and not as today by haphazard public welfare and organized charity allowances.

To meet the cost to the state of such a scheme as outlined, the State Department of Health-Welfare to take over the proceeds from all endowments, incomes, investments, contributions and other sources of support now controlled by the educational institutions, hospitals and other institutions to be included in this scheme as well as any similar funds that in the future may be acquired for such purposes.

To meet any deficit arising from carrying out such scheme every individual in the state to be taxed from year to year for its maintenance.

When institutions are taken over by the state no discrimination to be practiced against those

upon the teaching staffs of educational institutions and upon the attending staffs of hospitals and similar institutions who desire to continue thereon. All new appointments to be made from grade after examination.

Note: Any person with brains enough to fill a thimble can readily see that this scheme i illegal, that before it could become operative it would require amending the constitution of every state in the Union. We wonder what the pack of addle-pated fools are going to try next?

We wish to emphasize the purport of a resolution enacted at the state meeting at Rockford (on recommendation of the State Health Insurance committee) to the effect that "we recommend to the doctors of Illinois that in the future they should be very careful about loaning their endorsement to any of these un-American schemes.

PHYSICIANS' FEES NOT INCREASED PROPORTIONATELY.

The index number of wholesale prices in the United States as ascertained by the Bureau of Labor Statistics for a larger number of articles than any other currently published series shows that prices continued to increase very considerably during March. Placing the index number of wholesale prices for 1913, at one hundred, we have the following increase noted for various groups of commodities in March, 1920:

Group of Commodities:

Farm Products	239
Food, etc.	246
Cloths and Clothing	355
Fuel and Lighting	192
Metals and Metal Products	192
Lumber and Building Material	325
Chemicals and Drugs	205
Housefurnishing Goods	329
Miscellaneous	230
All Commodities	253

Another group prepared by the Bureau of Crop Estimates of the Department of Agriculture showing the average prices received March 1, 1914, and March 1, 1920, shows the following increases:

	Per cent
Cotton	200
Wheat	173
Corn	116
Potatoes	244
Hay	91
Eggs	96
Butter	115
Wool	231

The average increase in cost in the latter group to the producers, not the consumers of the eight staple products mentioned, is 158 per cent.

If the fees of physicians had advanced at the same rate, doctors who in 1914 received $2 per call, should now charge $5.16; physicians who in 1915 received $3 per call, should now charge $7.75.

Every physician must use seven of the eight products enumerated in the latter table, the one he will not use is hay, which increased the least.

The attention of the profession and the public should be forcibly impressed with these facts. If this were done it will facilitate the adjustment of increased physicians' fees which must be paid.

INFLUENZA MORE DEADLY THAN WAR.

The insurance press for September, 1919, is authority for the statement that ten persons died from influenza in 1918 to each American soldier killed in battle. The mortality rate with which the American Life Insurance Companies were confronted during 1918 were about 32 per cent greater than in 1917. The number of deaths due to influenza in the United States is rated at 500,000 for the year. Seventy per cent. of the previous years victims were between the ages of 15 and 45. No satisfactory explanation has thus far been given for the attraction shown by the germs towards persons of a certain age.

Public Health

DIAGNOSTIC LABORATORIES

With the incidence of communicable disease throughout the state comparatively low, the Diagnostic Laboratories of the State Department of Public Health performed a larger service during the first quarter of the year 1920 than for any similar period in any preceding year. Comparing the first three months of 1919 with the first quarter of 1920, we find an increase of 100 per cent. in sputum specimens examined for the presence of tubercle bacilli; 100 per cent. in Widal tests for typhoid fever; 134 per cent. in swabs from the throat for diphtheria; 411 per cent. of smears for the detection of gonococci, and an increase of 583 per cent. in Wassermann tests.

In actual numbers the specimens examined during the three months ending March, 1920, were:

Diphtheria swabs, 501; Widal tests, 345; smears for gonococci, 430; sputum specimens for tubercle bacilli, 1681, and Wassermann tests, 3,514.

COUNTY TUBERCULOSIS CLINICAL SERVICE

As a part of the program for the control of tuberculosis in Illinois, carried out jointly by the State Department of Public Health and the Illinois Tuberculosis Association, a clinical consulting staff has been created and a campaign of clinical meetings under the auspices of County Medical Societies is now being carried on.

During the month of May clinical meetings before county medical societies were held in over twenty counties, into fourteen of which the State Tuberculosis Association, working in conjunction with the Chicago School of Civics and Philanthropy, sent specially qualified nurses to conduct tuberculosis surveys, in co-operation with the local medical profession.

The largest of these clinical meetings was held at Edwardsville on May 26th, under the auspices of the Madison County Society, with the members of medical societies of five adjoining counties as specially invited guests.

INCREASED CHILD WELFARE WORK

The Division of Child Hygiene and Public Health Nursing of the State Department of Public Health reports that the clinic for crippled children at Freeport has already registered 200 patients from Stephenson, Carroll and Jo Daviess Counties. The city of Freeport recently raised $10,000 for volunteer public health work and has developed an extensive child welfare program.

Nutrition classes have been established in practically all schools, and all school children are subjected to physical examination and mental tests. A visiting housewife nurse has been employed to visit the homes of children suffering from malnutrition and to instruct the mothers in regard to their feeding and care.

At Streator and Princeton, where one-half day clinics were originally held for crippled children, the demand has become so great that it is now necessary to devote a full day to each of these communities. Each of these clinics is now receiving from thirty to forty crippled children on each clinic day, and the success is largely attributed to the enthusiastic support given by the members of the medical profession.

ROCKFORD SURVEY REPORT

The complete report of the sanitary survey of the city of Rockford, carried out by the Division of Surveys and Rural Hygiene of the State Department of Public Health, has been printed and is now available for those interested in it. The edition is limited, but copies will be sent without charge on application to the State Department of Public Health, Springfield.

ADAMS COUNTY TUBERCULOSIS SANATORIUM

The Adams County Tuberculosis Sanitorium at Quincy was opened early in May, with a capacity of 25 patients.

Society Proceedings

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting May 5, 1920

1. Control Methods in the Treatment of Diabetes Mellitus.
   Solomon Strouse.
2. Tuberculosis of the Abdominal Peritoneum.
   Walter B. Metcalf.
3. Heart Valve Syphilis.
   John Weatherson.

Regular Meeting

1. The Nursing Situation as Affected by the Recent Opinion of the Attorney General.
   Chas. E. Humiston,
   Legislative Committee Illinois State Medical Society.
2. The Nursing Problem, a Suggestion for Its Solution. Edward H. Ochsner.

Discussion:

M. L. Harris, President,
Illinois Hospital Association.
Prof. Francis Shepardson, Director,
Board of Registration and Education,
Springfield, Ill.
John Dill Robertson,
Commissioner of Health.

Regular Meeting, May 26, 1920

Joint Meeting of the Chicago Medical Society and the Chicago Ophthalmological Society

1. The Importance of Early Treatment for Strabismus. Dwight C. Orcutt.
2. Preventable Blindness. Illustrated with Stereopticon Slides. Richard J. Tivnen.

CHICAGO OPHTHALMOLOGICAL SOCIETY

Meeting of Oct. 13, 1919 (Concluded)

Under mydriasis the following was noted: Pupil dilated equally and mildly; media negative; disc apparently small; temporal side well defined; nasal side slightly hazy, but not due to exudate, but as if unable to focus ophthalmoscope perfectly, which the speaker believed was due to its distorted position. The disc protrudes forward about six D. Vessels are clean cut, slightly tortuous, but in direct ratio to the

forward position of the disc. There are no evidences of a perivasculitis, or fluid stasis. The fine feathery arrangement seen in inflammation is absent. The forward protrusion of the disc includes more than the nerve head, and I should say it also includes the posterior pole of the eyeball, as if something hard was pushing it forward.

Retinoscopy R +10.00
+10.50 +9.50 Sph. 15/25.
L. +2.75
+3.25 +1.75=50 cx 90 15/15

It would appear that this degree of hyperopia was artificial. X-ray pictures (flat pictures) disclosed nothing. Two sets of stereos added nothing to our knowledge.

BUPHTHALMOS, SECONDARY TO OPHTHALMIA NEONATORUM

Dr. Goldenburg also reported the following case:

Case II. The next case is a baby that came into his clinic August 1, 1919, with the following history:

At that time the child was one year of age. The baby was born at home. The mother does not know if drops were instilled at the time of birth. On the second or third day pus appeared in both eyes. This was treated as far as she knows with argyrol. Bacterial examination made when the child was three weeks of age disclosed the presence of the diplococcus of Neisser. When six weeks of age the pus disappeared. At this time bulging was already noticed. The child was then treated with two per cent. atropin until 9 months of age. For the past three months the child has received no treatment.

Upon examination a leucoma adherens was found on both eyes, with nystagmus. Both eyes were very large and the left much more so. Tension was markedly increased. The anterior chambers were obliterated.

Upon discussing the case with the other men in the service as to what could possibly be done for this child, the idea that first occurred to the speaker was that of reducing the tension with the hope of at least saving the optic nerve and possibly later trying some corneal surgery of which he hoped to say more at some future time. Then again it was known that some of these leucomata do clear up to some extent. It seemed to be worth while trying, and on August 10, 1919, the child was prepared for an intraocular operation. Ether anesthesia was used. A conjunctival flap was made with the idea of doing an iridoptosis operation. A small keratome incision was then made about two millimeters back of the limbus and an iris forceps was inserted, but the iris was so bound down that nothing could be accomplished. The speaker then went in with a small blunt hook and loosened up the iris, which seemed sufficient, but still he could not pull the iris out and decided to do an iridectomy. The child made an uneventful recovery. We now have an anterior chamber, the tension is surely lower than the left eye, and the mother is sure the child is able to recognize objects. The nystagmus seems to be somewhat reduced.

DISCUSSION

Dr. Bulson asked whether there was any limitation to the movement of the eye.

Dr. Goldenburg replied, apparently not.

Dr. George F. Suker asked what the patient's vision was at the present time.

Dr. Goldenburg replied, 16/25 with the correction.

Dr. Oliver Tydings asked what the correction was now.

Dr. Goldenburg replied, 9½ D.

Dr. Bulson asked as to the condition of the vascular system.

Dr. Goldenburg replied, he has no tachycardia; no possible exophthalmic goiter; no Graefe; no Moebius. Three years ago his vision without glasses was just the same as the left eye. The process started about three years ago.

He would like to ask whether any of the members were willing to suggest what should be done for the proptosis case, or should it be let alone? He was inclined to think that a neoplasm existed within the muscle cone which seemed to be pressing the posterior pole of the eyeball forward producing the apparent bulging of the disc.

Dr. George F. Suker stated that inasmuch as the patient still had approximately 20/20 vision and, after carefully scrutinizing the two former photographs of the case, he labored under the impression that the right eye was not at that time in the same position as the left one. Taking this fact into consideration and the clear media the patient has, there was no doubt something could be done. The little swelling of the disc was suggestive of an infiltration, such as one would see in a beginning papillodema. The eyeball can even now be pushed back into the socket without any particular pain. At the present time the only thing he considered feasible and justifiable was a modified Kronlein operation so as to have a large field for exploration. He did not think it was feasible to do a canthotomy and explore the orbit in this way as one might do more damage to muscles and increase the proptosis more than it was at the present time. He thought one would be safe in doing a Kronlein; but, the patient should be kept under observation for a considerable time; and, as long as vision could be maintained at the present point without undue suffering or disfigurement, he would advise to leave the eye alone.

Dr. Oliver Tydings suggested that the patient be put on desiccated thyroid. He also asked as to the possibility of syphilis.

Dr. Goldenburg replied he did not know as to syphilis.

Dr. Tydings said that if the case was syphilitic it would be well to combine the desiccated thyroid with mercury and other agents. He would put the patient on iodin or desiccated thyroid and use it to the full limit before undertaking an operative procedure.

SIDEROSIS BULBI

Dr. Alfred N. Murray reported the following case: The patient whose case he reported came under his observation a week ago. There has not been much chance to study it, but there are a number of interesting aspects about it, such as the history of the case, the location of the foreign body, as demonstrated by the x-ray, and the condition itself—siderosis bulbi. This man was boring on a one-inch plate of steel with a bit when some particles of steel flew off. This was on January 6, 1919. At the time it was recognized at the factory that there was a foreign body in his *right* eye. No attention was paid to the left eye. About the third day after the injury there was a slight irritation of the left eye and some slight blurring of vision. The blurring continued and increased until about the fifth month, when the vision was almost completely gone in the left eye. He could recognize movement of the hand at that time, that is, in June, but since then the vision has been reduced to faulty projection. There has been scarcely any irritation of

the eye during this entire period, except for the first few days following the accident. The location of the foreign body was demonstrated by the Sweet chart as being ten millimeters back of the cornea and seven millimeters to the temporal side; therefore, suspended in the vitreous. The x-ray picture showed it to be about a millimeter in all of its diameters. The probabilities are the preliminary loss of vision was due to a slight hyalitis which gradually increased; encapsulation of the foreign body following. In course of time low grade chorioditis developed, followed by lenticular changes which resulted in a total cataract.

The condition of siderosis bulbi is an unusually interesting one, and is seen only with maximum dilatation of the pupil. This case shows very clearly 13 distinct round, rust-colored spots, corresponding quite well to the position of hours on the dial of a clock, and arranged quite symmetrically. On close examination with the loupe, there are to be seen some fine, irregularly distributed, dust-like spots at the lower part of the lens. All of these spots are underneath the capsule of the lens. They are shown only with full dilatation of the pupil. The lens is cataractous, but it is more or less a diffused cataract, the lens striae not being visible. He has advised enucleation of the eye, on account of the possibility of sympathetic ophthalmia. It is to him a very unusual and interesting case. In twenty years he has not seen any case which so beautifully shows the symmetry of the dots. In this case the siderosis involves not only the lens, but the iris as well. When the pupil is not dilated the iris presents a rusty color, not a normal greenish or brownish color, but what impresses one as a pathologic coloring.

There is no question whatever in the mind of any one after seeing this iris in comparison with the iris of the other eye but what this is a comparatively recent abnormal condition and not a condition of heterochromia iridis.

He should be glad to have the members offer any suggestions they might have regarding this case. To him it is a perfectly clean cut case, with the history of an injury and development of this condition called siderosis, which is a rare condition and not much more than mentioned in most of the textbooks.

The speaker was not able to account for the development of complete cataract in this case, or as to why it should have occurred without direct injury to the lens, unless it developed as a consequence. Assuming the foreign body is seven millimeters to the temporal side, that would bring the point of perforation about the limbus, in which case it would not have penetrated the lens itself, but the zonule—that is, assuming that it flew directly at the eye.

DISCUSSION

DR. BROWN asked whether there was any pain or inflammation at the time.

DR. MURRAY replied, no.

DR. HARRY S. GRADLE asked where the foreign body struck the eye and the site of perforation.

DR. MURRAY replied that he could not find the site of perforation. The foreign body was but a millimeter in diameter. There is no scar in the cornea.

DR. GRADLE asked whether there was any history of previous trauma to the eye.

DR. MURRAY replied that there was not.

DR. GRADLE said the spots symmetrically arranged might be the result of a sudden blow on the anterior portion of the eye.

DR. MURRAY replied that that would not account for the colored spots, and the color of the iris, which was similar to the color of the spots in the lens.

DR. GRADLE said it seemed to him that the coloring of the spots was unusually red for siderosis. He had seen cases of siderosis and the spots were not exactly that color.

DR. MURRAY replied, the rust spots could be dark or light. There might be a variation in intensity. The lens was cataractous, which might alter the color by contrast.

DR. GRADLE said they were uniformly red and of hyalin consistency. This might be a superficial observation. He would like to ask Dr. Murray how he made the diagnosis of siderosis and excluded some of the other conditions that might be confounded with it?

DR. MURRAY replied that nothing but siderosis could produce such a picture as this; the siderosis of the iris positively confirming the diagnosis. Hemorrhage could produce that appearance of the iris, but it could not produce these symmetrically arranged spots under the capsule of the lens.

DR. GEORGE F. SUKER said he would like to ask Dr. Murray a hypothetical question. Might it not be a case of heterochromia? He agreed with Dr. Gradle that the color was too intense to be siderosis. Might it not be a case of cataracta punctata rubrum and the foreign body simply producing a traumatic cataract in addition? Maybe the patient did have normal vision at one time.

He asked this question for the reason that a year ago in May it was his good fortune to examine a soldier who had 20/20 vision, and on dilating the iris he found red spots underneath the anterior surface of the capsule of the lens. This soldier went abroad, and when he returned he had a traumatic cataract. The red spots in the lens of this soldier were identical with the ones seen in Dr. Murray's case. He also had heterochromia. These rust colored spots did hardly result from the dissemination of oxidized iron. For, the foreign body was only one millimeter ground, and these thirteen or so spots are much larger than a millimeter by a good deal, and it was hardly to be supposed one millimeter of substance could give such numerous oxidization spots. Cataracta punctat rubrum is always underneath the anterior capsule of the lens and usually in the periphery. Furthermore, the lens might have been injured because it appeared to him the lens was subluxuated from swelling or otherwise, because the anterior chamber was obliterated at one angle. The fact that the iris dilated at maximum and presented these red colored spots was somewhat unusual unless it was a congenital affair, because in the majority of cases of siderosis bulbi in which deposits have taken place there was more or less immobility of the iris, and more or less localized traumatic iritis, and consequently a destruction of the iris tissue. If the iris was intact he was inclined to believe there was a double lesion, a congenital cataracta rubrum as well as a secondary traumatic cataract. From a hasty examination he should take it to be a case of cataracta punctat rubrum with a penetrating foreign body causing the secondary conditions. It appears that these rust colored spots in Dr. Murray's case are underneath the capsule, while in siderosis the spots are usually on top of the capsule.

DR. ROBERT VON DER HEYDT, in referring to the remarks of Dr. Gradle, who mentioned the possibility of a previous blow to the eye, and suggested the condition might be one of "Vossius Ringtruebung, although he did not use that term, said, "In the latter condition there is a ring of deposit on the anterior lens capsule, composed of blood coagula, iris debris and pigment due to the impact. However, in the case shown by Dr. Murray we have these spots under the capsule. They are proliferations of the lens epithelium and have taken up the iron oxid. The case is one of siderosis bulbi, the dots a rare manifestation, however clinically recognized and described by many authors, including de Schweinitz and Axenfeld."

DR. MURRAY said if there was any one present who could

answer the learned and hair-splitting hypothetical question of Dr. Suker he would thank him for doing so.

The history of this case, he said, spoke in favor of siderosis bulbi. In a congenital condition it was not uncommon to have both eyes involved, in the majority of cases. If one found the condition in one eye, he was likely to find it in the other, and to find other earmarks of congenital defects. If Dr. Suker could see the undilated pupil there would be no question whatever that this was a pathologic appearance of the iris and not a heterochromia iridis.

As to perforation of the lens, the localization showed that it must have perforated the zonule. He did not think it would penetrate the lens itself in that location unless it went diagonally through. Considering the injury and the fact that the man's vision began to blur three days thereafter, and became gradually reduced in five months to hand movement, it certainly speaks for a traumatic condition.

As to congenital cataract he saw no reason why that should show up in five months. The man's vision was normal until the accident. He had never noticed a difference in the color of his eyes. While the speaker wanted to consider every possible aspect of the case, it was still his opinion that the case was one of siderosis bulbi. Since there was a foreign body in the eye as shown and localized by the X-ray, known to be metal, following a definite injury, a certain length of time elapsing between the injury and the development of visible signs so absolutely characteristic of siderosis bulbi, with symmetrically arranged round rust colored spots, seen only when the pupil was dilated to the maximum, he was willing to stake his reputation on the fact that it was a case of siderosis bulbi.

Dr. Suker stated that Dr. Murray had misunderstood him, in that he did not say the case was one of congenital cataract but a cataractous process due to the injury which the man had received. One could have cataracta punctata rubrum with normal vision. He had seen three such cases in which the condition was unilateral. The soldier he had referred to was in the Walter Reed Hospital under the charge of Dr. de Schweinitz who studied the case very carefully. The case was considered by Dr. de Scheinitz as a novel one, and the cataract the man had received was the result of concussion. When he saw the iris the year before he had these spots with a clear media, and they were underneath the anterior capsule of the lens.

DE KALB COUNTY

May 12, 1920, the DeKalb County Medical Society met at the Glidden House, DeKalb, Ill., with 26 physicians present. Among our guests for dinner were Dr. W. D. Sansum of Chicago, the speaker of the day, and a delegation of seven physicians from Will County Medical Society.

Dr. Anna Gloss, returned Medical Missionary, sent up an exhibition of Chinese medicines and surgical instruments, which showed the primitive nature of the Healing Art in China.

Each member of the Will County delegation favored us with a short address, speaking of the conditions that confront the small towns and country practitioner which physicians in large cities often fail to appreciate. All boosted for more friendly relations between physicians and admonished us to take more interest in local affairs.

Dr. J. P. Kane introduced a resolution, known as Proposal Number 300, which, if incorporated in the new Constitution of Illinois will grant equal privileges to all in the practice of the Healing Art for pay and special privileges to none. Adoption moved by Dr. J. P. Kane and seconded by Dr. J. M. Everett; carried.

Dr. Florimond LeBlanc was unanimously voted into the society.

We then listened to a splendid address on "Diabetes" by Dr. W. D. Sansum of Chicago. Dr. Sansum presented us each with a mimeographed folder giving tests, charts, etc., which enabled us to follow his lecture better.

Meeting adjourned amid general expressions of appreciation of the instructive program.

LA SALLE COUNTY

The La Salle County Medical Society held its sixty-eighth semi-annual meeting at the County Tubercular Sanitarium, Ottawa, April 20, 1920.

The following program was given:

General Business.

"Colic in Breast Fed Infants," Dr. Clifford G. Grulee, Chicago.

A talk on "The Clinical Differentiation of the Cardiac Arrhythmias," Dr. N. C. Gilbert, Chicago.

"Diagnosis of Incipient Pulmonary Tuberculosis," Dr. F. J. Maciejewski, La Salle.

Demonstration of an Artificial Pneumothorax, Dr. Ethan A. Gray, Chicago.

The La Salle County Medical Society in convention assembled in the city of Ottawa, April 20, 1920, after due consideration has adopted the following resolution,

Wheras: The Constitutional Convention of the State of Illinois is now considering the importance of presenting a constitution. It is just that provision should be made for the care and attention of the unfortunate people who are sick.

Resolved: That any and every one who professes to treat the sick should present the same qualifications. Be it further,

Resolved: That no power shall exist to impose, hereafter, any term or restriction or give power to any person or persons to treat or undertake to treat any ailment, infirmity or disease of another for pay, reward or compensation, upon any different terms, limitations, qualifications or perequisites from those granted or limited to every other person or persons, who may hereafter be licensed to undertake to treat or cure the sick or infirm, or to preserve from sickness or infirmity, persons within the state. Be it further

Resolved: That a copy of these resolutions be sent to Dr. E. B. Coolley of Danville and that our delegate be instructed to inform the Medico Legal Committee of this action.

J. W. Edgcomb,
E. W. Weis,
Wm. Schoenneshoefer.

After the completion of the program the Ottawa Physicians Club entertained the members at dinner.

MADISON COUNTY

The Madison County Medical Society met at Edwardsville, on Friday, April 2, 1920, with Dr. F. O. Johnson, president, in the chair.

Proposal No. 300 was read and the secretary was instructed to write to H. F. Lill, of East St. Louis, asking him to support the proposal. It was also ordered that every member write to our delegates, J. J. Brenholt and C. J. Lindley, soliciting their active

support for this measure. On motion of Dr. W. H. C. Smith the society went on record as heartily endorsing this measure and promising our loyal support.

The committee on resolutions on the death of Dr. H. R. Lemen presented its report which was adopted. (Published in May JOURNAL.)

The committee on revision of Constitution and By-laws made its report which was adopted and the secretary instructed to have 200 copies printed and distributed.

On motion Louis Beaman was admitted to the Harrison Colony at the expense of our association.

On motion of Dr. W. H. C. Smith, it was decided that we request the Board of Supervisors to defray the expenses of the care of indigent tuberculosis patients at the Harrison Colony to the extent of the cost of their support at the County Hospital.

The Community Nurse read her report for the month of March, which was ordered filed.

Dr. Willard Bartlett, of St. Louis, then read a paper on "Goitre Surgery," detailing the result of from 400 to 500 operations. The paper was full of interest and instruction and was received with marked attention by all who were present.

A rising vote of thanks was tendered to our distinguished speaker, after which the society adjourned.

OGLE COUNTY

The Ogle County Medical Society met in the town hall in Mount Morris at 1:30 P. M., Wednesday, May 5, 1920. Roll call found nine members and three visitors present. Dr. W. F. Kittler presiding. Minutes of the previous meeting was read by the secretary and approved. Dr. Curtis Powell, of Polo, was admitted to membership.

Owing to heavy rains and bad roads the meeting was postponed three times and in view of these facts the meeting was a success.

Motion made—that the secretary be instructed to write Jas. Nickoles and Bruce Garrett, members of Constitutional Convention, requesting, in the name of the Ogle County Medical Society that they support proposal No. 300 in the Constitutional Amendment. Motion carried.

Dr. N. B. Harlin, of Freeport, read an interesting and instructive paper on "The Frequent Inability of the Modern Mother to Nurse Her Infant and the Reason Therefore." The discussion that followed this paper brought out many good points for the obstetrician to follow.

Dr. J. Shelden Clark, of Freeport, read an able paper on "What Should Be the General Practitioner's Attitude In the Case of Acute Mastoiditis?" This paper was well received and in the discussion many good ideas were brought out.

On motion of Dr. Beveridge, a vote of sincere thanks and appreciation were given, by rising vote, to Drs. Clark and Harlin for their well received papers.

Adjourned to meet in Oregon at the next regular meeting to be held in July, 1920.

DR. J. T. KRETSINGER, Secretary.

PIKE COUNTY

The Pike County Medical Society met in Pittsfield, Thursday, April 22, 1920. There was a good attendance and much interest shown in the program. After a good dinner at the cafe the society adjourned to the city hall for the scientific part of the day's work.

The annual election of officers for the ensuing year took place with the following result:

J. E. Goodman, Pleasant Hill, president.

W. J. McConnell, Baylis, vice-president.

W. E. Shastid, Pittsfield, secretary-treasurer and delegate.

F. N. Wells, Pittsfield, alternate.

The society unanimously endorsed the resolution known as Proposal No. 300, which means that the Constitutional Convention is urged to adopt in its new laws the proposition, "that there will be but one door to the privilege of practising the healing art for remuneration."

Dr. Carl Black, of Jacksonville, then presented a thoughtful and comprehensive paper on, "Thoughts On the Cancer Problem," which received much attention and discussion.

Dr. Frank Norbury, of Jacksonville, then read a paper on "Cerebral Topography and Localization," which showed much scholarly research and was illustrated by drawings.

Both of these physicians received a vote of thanks for their splendid efforts, from the society.

The next meeting will be held at Pleasant Hill.

W. E. SHASTID, Secretary.

ST. CLAIR COUNTY

The St. Clair County Medical Society met in regular session in the Chamber of Commerce rooms, Murphy Building, East St. Louis, Illinois, May 6, 1920, at eight o'clock P. M. Thirteen members and two guests were present.

Minutes of April meeting approved as printed in May BULLETIN.

The treasurer reported $305.28 in treasury.

Secretary reported one hundred and fifteen members in good standing and sixty-eight physicians in the county not affiliated with any medical society.

A report of the censor, relative to conduct of St. Clair County physicians in attendance at A. M. A. meeting in New Orleans, was read and briefly discussed.

Dr. W. S. Wiatt read a paper on "Carcinoma of the Ceco-Colon" and exhibited some radiograms with case reports. The paper was interesting and instructive, and was discussed at length by the members.

Upon motion of Dr. Lillie, Drs. W. S. Wiatt and M. F. Arbuckle were elected honorary members of the society.

No further business appearing, the society adjourned.

WALTER WILHELMJ, Secretary.

WOODFORD COUNTY

The annual meeting of the Woodford County Medical Society was held in the court house at Eureka, Tuesday, May 4, at ten o'clock A. M. Meeting was called to order by Vice-President J. I. Knoblauch. Seven members were present.

Minutes of previous meetings read and approved. Secretary-treasurer report read and approved as read. Proposal No. 300 as presented to the Constitutional Convention by the state committee was read and was approved unanimously.

It was moved and seconded that the president appoint a committee of three to draft resolutions on the death of James Tweddale, H. N. Barth, H. B. Perry and C. F. Banta. Motion carried. The president appointed the following named members on this committee: J. I. Knoblauch, S. M. Burdon and F. W. Nickel.

It was proposed that we revise our Constitution and By-Laws and that we change the date of our annual meeting from the first Tuesday in May to the first Tuesday in December and that we hold one regular meeting the first Tuesday of each month. It was moved and seconded that the proposal be adopted and that the president appoint a committee of three to draft changes in accordance with the proposals. Motion carried unanimously. The president appointed F. W. Wilcox, J. I. Knoblauch and H. A. Millard on this committee to report at the June meeting. It was then moved and seconded that we have no election at this meeting and that the old officers hold over till the December meeting. Motion carried.

Applications of the following named doctors for membership in the Woodford County Medical Society were received and referred to the board of censors. F. D. McNertney, A. E. McReynolds and R. T. Rodawar. Adjourned for lunch.

Called to order at one o'clock by President F. W. Wilcox. Influenza, Complications and Sequela was discussed with interest and enthusiasm by all present.

It was decided to hold the June meeting in Minonk. Subject for discussion to be "Acute Infectious Diseases."

On motion adjourned.

H. A. MILLARD, Secretary.

Personals

Dr. Arthur F. Stotts, Galesburg, who was shot, May 8, is reported to be improving slowly.

Dr. J. Warren Van Derslice, Oak Park, has been elected president of the Colonial Club, Oak Park.

Dr. Frank P. Norbury, Springfield, has been appointed neuropsychiatrist to the Wabash Railway System.

Dr. J. Forrest Bell of Elgin delivered the graduation oration at the Sherman Hospital nurses' school, May 6.

Dr. Charles Louis Mix has accepted the position as head of the department of medicine of Loyola University School of Medicine.

Dr. Elmer L. Crouch, Jacksonville, has become medical director of the Sanatorium for Nervous and Mental Diseases at Stamford, Conn.

Drs. C. Hubart Lovewell and Elmer E. Simpson were overcome by fumes from a gas heater while attempting to revive patients who had been overcome by gas.

William Gardner Cottrell, Ph.D., was awarded the tenth William Gibbs Medal at a dinner tendered by the Chicago Section of the American Chemical Society at the City Club, April 21.

Free eye clinics are being established under the auspices of the State Department of Public Welfare and the Eye Department of Northwestern University School of Medicine. The first clinic was opened at Mt. Vernon, May 10.

Dr. Wesley Hamilton Peck, formerly president of the ophthalmologic section of the Illinois State Medical Society, was presented with a silver loving cup at the Rockford meeting, May 19, as an appreciation of his efforts in behalf of the section. Dr. Willis O. Nance made the presentation address.

News Notes

—The Elgin Physicians Club re-elected the former officers, May 4, for another year.

—Piatt County is said to have let a contract for a Tuberculosis Sanitarium at Monticello to cost $50,000.

—The physicians of Clinton have decided to close their offices Thursday afternoons and evenings during the summer.

—Dr. S. A. Thompson has purchased a 25-acre tract of land and a residence in Mt. Vernon for a temporary hospital.

—Following its custom of recent years, the JOURNAL presents its readers with the portrait of the new president of the society.

—The Rock Island County Board of Supervisors has voted $6,000 for the establishment of a venereal disease clinic in the county. The state will appropriate $200 a month toward the upkeep of the clinic.

—On May 26, 1920, the Chicago Polish Medical Society entertained Dr. Wladyslaw A. Kuflewski, the organizer, life member and former president of said Society, on the 50th anniversary of his birthday.

—Adams County has recently opened a tuberculosis sanatorium at Quincy with a capacity of twenty-five patients. It is under the charge of Dr. Harry C. Worthington, formerly senior physician to the Cook County Tuberculosis Hospital, Oak Forest.

—A site for the McDonough County Tuberculosis Sanitarium has been purchased at Bushnell, the consideration being $2,000. Ground has been broken for a new nurses' home, which is being erected at a cost of $125,000. The plan calls for a three-story brick building which is to be thoroughly modern.

—The Howard Taylor Ricketts Prize of the University of Chicago for 1920 has been awarded to Ivan C. Hall for his work on "Studies in Anærobiology." This prize is awarded annually on May 3, the anniversary of the death of Dr. Ricketts from typhus fever, while engaged in work on this disease in Mexico City in 1910.

—The Illinois State Tuberculosis Association and Chicago School of Civics are cooperating in an interesting nursing experiment. Fourteen nurses from the class of public health nursing have been assigned for the month of May to make an extensive health and sickness survey in fourteen counties of the state. By this plan it is hoped to develop a knowledge of the tuberculosis situation and to induce the counties to support permanent public health nurses.

—More than 100 medical officers who had served during the World War assembled in Rockford May 19, at the call of Dr. John M. Dodson, Chicago, and organized the Illinois Chapter of the Medical Veterans of the World War, electing Dr. Joseph R. Hollowbush, Rock Island, as vice president for Illinois of the national organization and chairman of the state chapter; Dr. Wilbur H. Gilmore, Mount Vernon, secretary-treasurer, and Drs. Malcolm L. Harris, Chicago, and Samuel M. Wylie, Paxton, councilors.

—During the summer quarter, June 21 to August 28, 1920, at Rush Medical College, there will be given a didactic, clinical and conference course on Tuberculosis every Wednesday and Saturday morning from nine to eleven o'clock.

The instructions will be of an essentially practical nature followed by a thorough study of the diagnosis and treatment of the various forms of tuberculosis. This course of instruction is in charge of Dr. John Ritter, Assistant Professor in Medicine, ably assisted by members of the dispensary staff.

The course is open to practitioners of medicine interested in this topic. For particulars address Rush Medical College, 1748 W. Harrison St., Chicago.

—A report from the director of registration and education of Illinois states that twenty-five chiropractors have been enjoined by the circuit court of Rock Island County from treating human ailments without state licenses. These twenty-five chiropractors are members of Class "A" of the Universal Chiropractors' Association with headquarters at Davenport, Iowa. The Class "A" members of this association pay a membership fee and quarterly dues. In consideration of the payments, the association pays all fines assessed against them by the courts in Illinois for practicing without licenses. It also pays the fees of attorneys for defending them. When a chiropractor is fined in the courts he is advised by the officers of the association to continue in his unlawful practice. The circuit court of Rock Island has temporarily enjoined these chiropractors from treating human ailments without licenses and has also enjoined them from carrying out the terms of their unlawful agreement with one another.

Marriages

William Simon Crowley to Miss Ethel Roth, both of Chicago, April 28.

George Michael Fitzgerald to Miss Eileen Phelan, both of Chicago, recently.

Jacob A. Kohn to Miss Jeanette Herma Schultz, both of Chicago, May 6.

JESSE HENRY ROTH, Kankakee, Ill., to Miss Josephine McAuley of Chicago, recently.

CHARLES KLAUS STULIK to Miss Zdenka Spatney, both of Chicago, May 10.

FREDERICK J. EBERSPACHER, Pana, Ill., to Miss Irene Hoyer of West Bend, Wis., April 28.

Deaths

JAMES CASE BRIXEY, Chicago; College of Physicians and Surgeons, Chicago, 1905; died, April 22.

A. THOMAS BUCHANAN, Chicago; St. Louis Medical College, 1872; aged 78; a veteran of the Civil War; died, April 22.

VICTOR H. PARKER, Carmi, Ill.; Jefferson Medical College, 1876; aged 67; died in a hospital in Jacksonville, Fla., April 6, from cardiorenal disease.

JAMES B. PATTERSON, Rockford, Ill.; Jefferson Medical College, 1862; aged 80; who fell March 2, fracturing his hip, died from senile myocarditis, April 2.

FRANKLIN A. WEATHERFORD, Chicago; College of Physicians and Surgeons, Chicago, 1895; a Fellow, A. M. A.; aged 54; died, May 2, from cerebral hemorrhage.

JAMES EDWARD EARLE NELLES, Oak Park, Ill.; University of Illinois, Chicago, 1907; aged 35; who served with the Canadian Army Medical Corps in England; died, March 12.

WILLIAM H. WELLS, Buckingham, Ill.; University of Louisville, Ky., 1883; aged 66; a member of the Illinois State Medical Society; died, April 30, from chronic bronchitis.

WILLIAM L. DOWNEY, Wenona, Ill.; Medical Department University of Iowa, Keokuk, 1865; aged 82; a veteran of the Civil War; for many years a druggist; died, April 7.

HARL L. GEE, Mount Vernon, Ill.; Washington University, St. Louis, 1898; aged 45; a member of the Illinois State Medical Society; died, April 26, from pulmonary tuberculosis.

JULIUS A. GOLTZ, Chicago; Bennett College of Eclectic Medicine and Surgery, Chicago, 1887; a Fellow, A. M. A.; aged 67; died, April 1, from cirrhosis of the liver.

ZEBA DARLING FRENCH, Lawrenceville, Ill.; University of Iowa, Keokuk, 1865; aged 82; surgeon of the Third U. S. Volunteer Cavalry (colored), during the Civil War; died, April 27.

ARTHUR O. SAX, Chicago; Hahnemann Medical College, Chicago, 1897; a Fellow, A. M. A.; aged 52; professor of theory and practice of medicine in his alma mater; died, April 23, from valvular heart disease.

PERSIS WHITE, Winnetka, Ill.; Northwestern University Woman's Medical School, Chicago, 1894; for eight years resident physician at the North Shore Health Resort, Winnetka; died, May 20, in St. Mary's Hospital, Rochester, Minn.

ALEXANDER WALLACE AIKEN, Chicago; University of Toronto and Trinity Medical College, Toronto, 1895; a Fellow, A. M. A.; aged 49; died in the Presbyterian Hospital, Chicago, April 27, from septicemia following an infected wound of the finger.

ARCHIBALD HAAS, Chicago; Bennett Medical College, Chicago, 1882; College of Physicians and Surgeons, Chicago, 1886; aged 70; died, May 22, from the effects of a gunshot wound, self-inflicted, it is believed, with suicidal intent, while despondent on account of ill health.

CHARLES F. LYNCH, Chicago; Bennett Medical College, Chicago, 1913; aged 33; major, M. O. R. C., U. S. Army; formerly district health officer at Aberdeen, S. D.; died in Presbyterian Hospital, Chicago, April 28, from septicemia following an infected wound of the finger.

HENRY MARTYN BANNISTER, Evanston; National Medical College, Washington, D. C., 1871; aged 75; former editor of the *Journal of Nervous and Mental Diseases* and assistant superintendent of the Kankakee State Hospital; an invalid for many years; died at his home, May 1.

CHARLES EDWIN BODDIGER, Chicago; College of Physicians and Surgeons, Chicago, 1893; a Fellow, A. M. A.; aged 52; captain, M. R. C., U. S. Army, and discharged Dec. 14, 1918; who was operated on for glioma of the brain, March 10, died in Wesley Memorial Hospital, Chicago, May 22.

SETH WICKS, Chicago; University of Illinois, Chicago, 1903; aged 40; a Fellow, A. M. A.; captain, M. R. C., U. S. Army, with service at Camp Custer, Mich., and discharged Jan. 29, 1919; instructor in biology in his alma mater; died in Lake View Hospital, Chicago, April 24, after an operation for appendicitis.

JOHN GAILEY CAMPBELL, Chicago; Northwestern University Medical School, Chicago, 1896; a Fellow, A. M. A.; aged 50; instructor in pediatrics and formerly instructor in physical diagnosis and clinical medicine in his alma mater; medical referee of the Mutual Life Insurance Company of New York; died, May 10, from pneumonia.

OMAR ADRIAN KELL, Salem, Ill.; Barnes Medical College, St. Louis, 1900; aged 48; a member of the Illinois State Medical Society; for several years resident neurologist at the Kankakee State Hospital; once mayor of Salem; died in the Missouri Baptist Sanitarium, St. Louis, April 11, from septicemia, due to an infection of the thumb.

FRANCIS ACHILLES DAVIS, Chicago; Northwestern University Medical School, Chicago, 1889; a Fellow, A. M. A.; aged 45; captain, M. R. C., U. S. Army, and discharged Jan. 20, 1919; formerly assistant professor of medicine in his alma mater, and a member of the medical staff of Wesley Memorial Hospital; died, May 3, from uremia and pneumonia.